

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 <code>ddd</code>
- Strings are stored either in PDFDocEncoding, which is a superset of ISO-Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

`\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{\LaTeX}%
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{\SliTeX}%
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}%

```

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

```

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

```

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

```

596 \ifHy@psdextra
597 \ifHy@unicode

```

```

598     \csname psdmapshortnames\endcsname
599     \csname psdaliasnames\endcsname
600     \fi
601     \fi

```

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

```

602     \let\foreignlanguage\@secondoftwo
603     \let\textlatin\@firstofone
604     \ltx@ifundefined{language@group}{\}%
605         \let\bbl@info\@gobble
606         \csname HyPsd@babel@\language@group\endcsname
607     }%
608     \let\@safe@activetrue\relax
609     \let\@safe@activesfalse\relax
610     \let\cyr\relax

```

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

Package german.

```

611     \let\glqq\textglqq
612     \let\grqq\textgrqq
613     \let\glq\textglq
614     \let\grq\textgrq
615     \let\flqq\textflqq
616     \let\frqq\textfrqq
617     \let\flq\textflq
618     \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}
619     \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

620     \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.

```

621     \let\hspace\HyPsd@hspace

```


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

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

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

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

Miscellaneous commands.

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

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

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

Patch for cjk bookmarks.

```
637 \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 T_EX's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in #2 additional redefinitions can be added by the hook \pdfstringdef-PreHook.

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

```
638 \Hy@pdfstringtrue
639 \pdfstringdefPreHook
```

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

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

Package xspace.

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

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
652 \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:

```
653 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
654 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
655 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
656 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
657 \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).

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

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

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

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

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

6.2.3 Postprocessing

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

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

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

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

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

```

677 \HyPsd@ProtectSpaces#1%
678 \let\HyPsd@String\@empty
679 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
680 \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 $\text{\HyPsd@CheckCatcodes}$ 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 $\text{\HyPsd@CheckCatcodes}$ is called.

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

```

681 \let\HyPsd@SPACEOPTI\relax
682 {%
683 \let\HyPsd@String\@empty
684 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
685 \global\let#1\HyPsd@String
686 }%
687 \expandafter\HyPsd@RemoveMask\expandafter
688 |\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.

```
689 \expandafter
690 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
691 \let\HyPsd@String\@empty
692 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
693 \global\let#1\HyPsd@String
```

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

```
694 \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.

```
695 \ifHy@unicode
696 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
697 \HyPsd@SPACEOPTI#1%
698 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
699 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
700 {\HyPsd@SPACEOPTI\80\273}#1%
701 \else
702 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
703 \expandafter\HyPsd@Subst\expandafter{%
704 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
705 \string\273}\HyPsd@SPACEOPTI\273}#1%
706 \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.

```
707 \ifHy@unicode
708 \HyPsd@StringSubst{\)}{\80\051}#1%
709 \HyPsd@Subst){\80\051}#1%
```

```

710 \let\HyPsd@empty\relax
711 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
712 {\HyPsd@empty\80\051}#1%
713 \else
714 \HyPsd@StringSubst{\}){\051}#1%
715 \HyPsd@Subst){\051}#1%
716 \let\HyPsd@empty\relax
717 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\}){\051}#1%
718 \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`.

```

719 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
720 \ltx@ifundefined{@xspace}{%
721 }{%
722 \let\HyPsd@xspace\relax
723 \expandafter\HyPsd@Subst\expandafter
724 {\HyPsd@XSPACE}\HyPsd@xspace#1%
725 \let\HyPsd@xspace\HyPsd@doxspace
726 }%
727 \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.

```

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

```

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

```
734 \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.

```
735 \ifHy@unicode
736 \HyPsd@StringSubst\(\textparenleft#1%
737 \HyPsd@Subst(\textparenleft#1%
738 \else
739 \HyPsd@StringSubst\({\050}#1%
740 \HyPsd@Subst({\050}#1%
741 \HyPsd@StringSubst{\050}{\string\}#1%
742 \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.

```
743 \ifHy@unicode
744 \edef\HyPsd@SPACEOPTI{\80\040}%
745 \else
746 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
747 \fi
748 \xdef#1{#1\@empty}%
749 \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.

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

Try conversion back to PDFDocEncoding.

```
754 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
755 \ltx@ifundefined{StringEncodingConvertTest}{%
756 }{%
757 \EdefUnescapeString\HyPsd@temp#1%
758 \iftutex
759 \let\HyPsd@UnescapedString\HyPsd@temp
760 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
761 {utf16be}{ascii-print}{%
762 \EdefEscapeString\HyPsd@temp\HyPsd@temp
763 \global\let#1\HyPsd@temp
764 \HyPsd@EscapeTeX#1%
765 \Hy@unicodedefalse
766 }{%
```

```

767      \HyPsd@EscapeTeX#1%
768    }%
769  \else
770    \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
771      {utf16be}{pdfdoc}{%
772      \EdefEscapeString\HyPsd@temp\HyPsd@temp
773      \global\let#1\HyPsd@temp
774      \HyPsd@EscapeTeX#1%
775      \Hy@unicodedefalse
776    }{}%
777  \fi
778 }%
779 \fi
780 \fi

```

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

```

781 \pdfstringdefPostHook#1%
782 \endgroup
783 }

```

`\Hy@pdfstringdef`

```

784 \def\Hy@pdfstringdef#1#2{%
785 \pdfstringdef\Hy@gtemp{#2}%
786 \let#1\Hy@gtemp
787 }

```

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

```

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

```



```

805 \let\HyLinguex@Restore\relax
806 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

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

```

\Hy@RestoreCatcodeSettings

```

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

```

854 }

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.

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

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

`\HyPsd@LoadExtra`

```
877 \def\HyPsd@LoadExtra{%
878   \ifHy@psdextra
879     \ltx@iffileloaded{puenc.def}{%
880       \Hy@SaveCatcodeSettings{psdextra}%
881       \input{psdextra.def}%
882       \Hy@RestoreCatcodeSettings{psdextra}%
883       \let\HyPsd@LoadExtra\relax
```

```

884   }{}%
885   \fi
886 }

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

`\texorpdfstring` While expanding the string in `\pdfstringdef` the switch `\ifHy@pdfstring` is set. This is used by the full expandible macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by T_EX's stomach, the second contains the replacement for PDF strings.

```

887 \def\texorpdfstring{%
888   \ifHy@pdfstring
889     \expandafter\@secondoftwo
890   \else
891     \expandafter\@firstoftwo
892   \fi
893 }

```

6.4.2 Hooks for `\pdfstringdef`

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

```

894 \@ifundefined{pdfstringdefPreHook}{%
895   \let\pdfstringdefPreHook\@empty
896 }{}
897 \@ifundefined{pdfstringdefPostHook}{%
898   \let\pdfstringdefPostHook\@gobble
899 }{}

```

`\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`.

```

900 \def\pdfstringdefDisableCommands{%
901   \begingroup
902     \makeatletter
903     \HyPsd@DisableCommands
904 }

```

`\HyPsd@DisableCommands`

```
905 \long\def\HyPsd@DisableCommands#1{%
906   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
907   \endgroup
908 }
```

`\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`.

```
909 \def\pdfstringdefWarn#1{%
910   \expandafter\noexpand\csname<>-string#1\endcsname
911 }
```

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.

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

```
921 \newif\ifHy@next
922 </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.

```
923 <*package>
```

6.5.3 CJK patch

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

```
\HyPsd@CJKhook
```

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

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 ($\geq 0x40$).

```
936 \begingroup
937 \catcode"7F=\active
938 \toks@{%
939   \let\CJK@ignorespaces\empty
940   \def\CJK@char#1{\@gobbletwo}%
941   \let\CJK@charx\@gobblefour
942   \let\CJK@punctchar\@gobblefour
943   \def\CJK@punctcharx#1{\@gobblefour}%
944   \catcode"7F=\active
945   \def^^7f#1^^7f#2^^7f{%
946     \string #1\HyPsd@DecimalToOctal{#2}%
```

```

947 }%
948 % ... ?
949 \ifHy@unicode
950 \def\Hy@cjkpu{\80}%
951 \else
952 \let\Hy@cjkpu\@empty
953 \fi
954 \HyPsd@CJKActiveChars
955 }%
956 \count@=127 %
957 \@whilenum\count@<255 \do{%
958 \advance\count@ by 1 %
959 \lccode\~=\count@
960 \lowercase{%
961 \toks@\expandafter{\the\toks@ ~}%
962 }%
963 }%
964 \toks@\expandafter{\the\toks@ !}%
965 \xdef\HyPsd@CJKhook@bookmarks{%
966 \the\toks@
967 }%
968 \endgroup

```

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

```

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

```

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

```

977 \def\HyPsd@DecimalToOctal#1{%
978 \ifcase #1 %
979 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
980 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
981 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
982 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
983 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
984 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
985 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
986 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
987 \or @\or A\or B\or C\or D\or E\or F\or G%
988 \or H\or I\or J\or K\or L\or M\or N\or O%
989 \or P\or Q\or R\or S\or T\or U\or V\or W%
990 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
991 \or \140\or a\or b\or c\or d\or e\or f\or g%
992 \or h\or i\or j\or k\or l\or m\or n\or o%
993 \or p\or q\or r\or s\or t\or u\or v\or w%
994 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
995 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%

```

```

996 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
997 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
998 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
999 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1000 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1001 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1002 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1003 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1004 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1005 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1006 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1007 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1008 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1009 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1010 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1011 \fi
1012 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1013 \def\HyPsd@CJKhook@unicode{%
1014 \let\Unicode\HyPsd@CJK@Unicode
1015 \let\CJKnumber\HyPsd@CJKnumber
1016 \let\CJKdigits\HyPsd@CJKdigits
1017 }

```

\HyPsd@CJK@Unicode

```

1018 \def\HyPsd@CJK@Unicode#1#2{%
1019 \ifnum#1<256 %
1020 \HyPsd@DecimalToOctalFirst{#1}%
1021 \HyPsd@DecimalToOctalSecond{#2}%
1022 \else
1023 \933%
1024 \expandafter\expandafter\expandafter\HyPsd@HighA
1025 \intcalcDiv{#1}{4}!%
1026 \933%
1027 \ifcase\intcalcMod{#1}{4} %
1028 4\or 5\or 6\or 7%
1029 \fi
1030 \HyPsd@DecimalToOctalSecond{#2}%
1031 \fi
1032 }

1033 \def\HyPsd@HighA#1!{%
1034 \expandafter\expandafter\expandafter\HyPsd@HighB
1035 \IntCalcDiv#1!64!!%
1036 \expandafter\expandafter\expandafter\HyPsd@HighD
1037 \IntCalcMod#1!64!!%
1038 }

1039 \def\HyPsd@HighB#1!{%
1040 \expandafter\expandafter\expandafter\HyPsd@HighC
1041 \IntCalcDec#1!!%
1042 }

```

```

1043 \def\HyPsd@HighC#1!{%
1044   \IntCalcDiv#1!4!%
1045   \@backslashchar
1046   \IntCalcMod#1!4!%
1047 }
1048 \def\HyPsd@HighD#1!{%
1049   \ifcase\IntCalcDiv#1!8! %
1050     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1051   \fi
1052   \ifcase\IntCalcMod#1!8! %
1053     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1054   \fi
1055 }
1056 \def\HyPsd@DecimalToOctalFirst#1{%
1057   \9%
1058   \ifcase#1 %
1059     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1060     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1061     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1062     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1063     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1064     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1065     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1066     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1067     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1068     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1069     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1070     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1071     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1072     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1073     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1074     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1075     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1076     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1077     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1078     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1079     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1080     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1081     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1082     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1083     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1084     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1085     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1086     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1087     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1088     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1089     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1090     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1091   \fi
1092 }
1093 \def\HyPsd@DecimalToOctalSecond#1{%
1094   \ifcase #1 %
1095     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1096     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%

```



```

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

1129 \def\HyPsd@CJKnumber#1{%
1130 \ifnum#1<\z@
1131 \CJK@minus
1132 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1133 \else
1134 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1135 \fi
1136 }

1137 \def\HyPsd@@CJKnumber#1{%
1138 \ifcase#1 %
1139 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1140 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1141 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1142 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1143 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1144 \CJK@ten\CJK@nine
1145 \else
1146 \ifnum#1<10000 %
1147 \HyPsd@CJKnumberFour#1!\@empty{20}%
1148 \@empty
1149 \else
1150 \ifnum#1<100000000 %

```

```

1151 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1152 \IntCalcDiv#1!10000!%
1153 !\CJK@zero{10}%
1154 \CJK@tenthousand
1155 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1156 \IntCalcMod#1!10000!%
1157 !\CJK@zero{10}%
1158 \@empty
1159 \else
1160 \expandafter\HyPsd@CJKnumberLarge
1161 \number\IntCalcDiv#1!100000000!\expandafter!%
1162 \number\IntCalcMod#1!100000000!!%
1163 \fi
1164 \fi
1165 \fi
1166 }
1167 \def\HyPsd@CJKnumberLarge#1!#2!{%
1168 \HyPsd@CJKnumberFour#1!{20}%
1169 \CJK@hundredmillion
1170 \ifnum#2=\z@
1171 \else
1172 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1173 \IntCalcDiv#2!10000!%
1174 !\CJK@zero{10}%
1175 \CJK@tenthousand
1176 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1177 \IntCalcMod#2!10000!%
1178 !\CJK@zero{10}%
1179 \@empty
1180 \fi
1181 }
1182 \def\HyPsd@CJKnumberFour#1!#2#3{%
1183 \ifnum#1=\z@
1184 \expandafter\@gobble
1185 \else
1186 \ifnum#1<1000 %
1187 #2%
1188 \HyPsd@CJKnumberThree#1!{3}%
1189 \else
1190 \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1191 \CJK@thousand
1192 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1193 \IntCalcMod#1!1000!%
1194 !\CJK@zero{10}%
1195 \fi
1196 \fi
1197 }
1198 \def\HyPsd@CJKnumberThree#1!#2#3{%
1199 \ifnum#1=\z@
1200 \else
1201 \ifnum#1<100 %
1202 #2%
1203 \HyPsd@CJKnumberTwo#1!{3}%
1204 \else

```

```

1205 \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1206 \CJK@hundred
1207 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1208 \IntCalcMod#1!100!%
1209 !\CJK@zero{10}%
1210 \fi
1211 \fi
1212 }
1213 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1214 \ifnum#1=\z@
1215 \else
1216 \ifnum#1<#3 %
1217 #2%
1218 \HyPsd@@CJKnumber{#1}%
1219 \else
1220 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1221 \CJK@ten
1222 \ifnum\IntCalcMod#1!10!=\z@
1223 \else
1224 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1225 \fi
1226 \fi
1227 \fi
1228 }
1229 \def\HyPsd@CJKdigits#1{%
1230 \ifx*#1\relax
1231 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1232 \else
1233 \HyPsd@@CJKdigits\CJK@null{#1}%
1234 \fi
1235 }
1236 \def\HyPsd@@CJKdigits#1#2{%
1237 \ifx\#2\%
1238 \else
1239 \HyPsd@@@CJKdigits#1#2\@nil
1240 \fi
1241 }%
1242 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1243 \HyPsd@CJKdigit#1{#2}%
1244 \ifx\#3\%
1245 \expandafter\@gobble
1246 \else
1247 \expandafter\@firstofone
1248 \fi
1249 {%
1250 \HyPsd@@@CJKdigits#1#3\@nil
1251 }%
1252 }
1253 \def\HyPsd@CJKdigit#1#2{%
1254 \ifcase#2 %
1255 #1\or
1256 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1257 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1258 \fi

```

6.5.6 \@inmathwarn-Patch

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

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

```

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

1260 \def\HyPsd@inmathwarn#1#2{%
1261   \ifx#2\expandafter
1262     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1263       \HyPsd@GLYPHERR
1264       \expandafter\@gobble\string#1%
1265       >%
1266       \expandafter\expandafter\expandafter\HyPsd@EndWithElse

```

```

1267 \else
1268 \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1269 \fi
1270 \else
1271 \expandafter#2%
1272 \fi
1273 }
1274 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1275 \def\HyPsd@EndWithElse#1\else{\else}

```

`\HyPsd@add@accent`

```

1276 \def\HyPsd@add@accent#1#2{%
1277 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1278 #2%
1279 }%

```

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`.

```

1280 \def\HyPsd@LetUnexpandableSpace#1{%
1281 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1282 }

```

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

```

1283 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.8 Marker for commands

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

```

1284 \edef\HyPsd@XSPACE{\string#\string X}
1285 \edef\HyPsd@ITALCORR{\string#\string I}
1286 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```

1287 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*END}

```

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

```

1288 \def\HyPsd@@hspace#1*#2END{%
1289 \ifx\#2\%

```

```

1290 \HyPsd@hspacetest{#1}%
1291 \else
1292 \expandafter\HyPsd@hspacetest
1293 \fi
1294 }

```

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

```

1295 \def\HyPsd@hspacetest#1{\ifdim\dimexpr#1\relax>\z@\space\fi}

```

6.5.10 Fix for AMS classes

```

1296 \ltx@ifundefined{tocsection}{%
1297 \let\HyPsd@AMSclassfix\relax
1298 }{%
1299 \def\HyPsd@AMSclassfix{%
1300 \let\tocpart\HyPsd@tocsection
1301 \let\tocchapter\HyPsd@tocsection
1302 \let\tocappendix\HyPsd@tocsection
1303 \let\tocsection\HyPsd@tocsection
1304 \let\tocsubsection\HyPsd@tocsection
1305 \let\tocsubsubsection\HyPsd@tocsection
1306 \let\tocparagraph\HyPsd@tocsection
1307 }%
1308 \def\HyPsd@tocsection#1#2#3{%
1309 \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1310 #3%
1311 }%
1312 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1313 \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.

```

1314 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1315 \def\HyPsd@@ref#1*#2\END{%
1316 \ifx\#2\%
1317 \HyPsd@@@ref{#1}%
1318 \else
1319 \expandafter\HyPsd@@@ref
1320 \fi
1321 }%

```

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

```

1322 \def\HyPsd@@@ref#1{%
1323 \expandafter\ifx\csname r@#1\endcsname\relax
1324 ??%
1325 \else
1326 \expandafter\expandafter\expandafter

```

```

1327 \car\csname r@#1\endcsname\@nil
1328 \fi
1329 }

```

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

```

1330 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*END}

```

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

```

1331 \def\HyPsd@@pageref#1*#2END{%
1332 \ifx\#2\%
1333 \HyPsd@@@pageref{#1}%
1334 \else
1335 \expandafter\HyPsd@@@pageref
1336 \fi
1337 }

```

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

```

1338 \def\HyPsd@@@pageref#1{%
1339 \expandafter\ifx\csname r@#1\endcsname\relax
1340 ??%
1341 \else
1342 \expandafter\expandafter\expandafter\expandafter
1343 \expandafter\expandafter\expandafter\@car
1344 \expandafter\expandafter\expandafter\@gobble
1345 \csname r@#1\endcsname{}\@nil
1346 \fi
1347 }

```

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

```

1348 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*END}

```

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

```

1349 \def\HyPsd@@nameref#1*#2END{%
1350 \ifx\#2\%
1351 \HyPsd@@@nameref{#1}%
1352 \else
1353 \expandafter\HyPsd@@@nameref
1354 \fi
1355 }

```

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

```

1356 \def\HyPsd@@@nameref#1{%
1357 \expandafter\ifx\csname r@#1\endcsname\relax
1358 ??%
1359 \else
1360 \expandafter\expandafter\expandafter\expandafter
1361 \expandafter\expandafter\expandafter\@car
1362 \expandafter\expandafter\expandafter\@gobbletwo
1363 \csname r@#1\endcsname{}\@nil
1364 \fi
1365 }

```

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

```
1366 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1367 \def\HyPsd@@autoref#1*#2\END{%
1368   \ifx\#2\%
1369     \HyPsd@@@autoref{#1}%
1370   \else
1371     \expandafter\HyPsd@@@autoref
1372   \fi
1373 }
```

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

```
1374 \def\HyPsd@@@autoref#1{%
1375   \expandafter\ifx\csname r@#1\endcsname\relax
1376     ??%
1377   \else
1378     \expandafter\expandafter\expandafter\HyPsd@autorefname
1379     \csname r@#1\endcsname\relax\@nil
1380   \expandafter\expandafter\expandafter
1381   \@car\csname r@#1\endcsname\@nil
1382   \fi
1383 }
```

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

```
1384 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1385   \ifx\#4\%
1386   \else
1387     \HyPsd@@autorefname#4.\@nil
1388   \fi
1389 }
```

`\HyPsd@@autorefname`

```
1390 \def\HyPsd@@autorefname#1.#2\@nil{%
1391   \ltx@ifundefined{#1autorefname}{%
1392     \ltx@ifundefined{#1name}{%
1393       }{%
1394         \csname#1name\endcsname\space
1395       }%
1396     }{%
1397       \csname#1autorefname\endcsname\space
1398     }%
1399 }
```

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

```

\HyPsd@DefCommand
\HyPsd@LetCommand 1400 \begingroup
1401   \def\x#1#2{%
1402     \endgroup
1403     \let#1\def
1404     \def\HyPsd@DefCommand##1##2###{%
1405       #1%
1406       \expandafter\noexpand
1407       \csname\expandafter\@gobble\string##1\@empty\endcsname
1408       \@gobble
1409     }%
1410     \let#2\let
1411     \def\HyPsd@@@LetCommand##1{%
1412       \expandafter\ifx\csname##1\expandafter\endcsname
1413         \csname iftrue\endcsname
1414       \pdfstringdefWarn\let
1415       \expandafter\@gobble
1416     \else
1417       \expandafter\ifx\csname##1\expandafter\endcsname
1418         \csname iffalse\endcsname
1419       \pdfstringdefWarn\let
1420       \expandafter\expandafter\expandafter\@gobble
1421     \else
1422       #2%
1423       \expandafter\noexpand
1424       \csname##1\expandafter\expandafter\expandafter\endcsname
1425     \fi
1426   \fi
1427 }%
1428 }%
```

```

1429 \expandafter\x\csname <def>-command\expandafter\endcsname
1430         \csname <let>-command\endcsname
1431 \def\HyPsd@LetCommand#1{%
1432 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1433 \expandafter\expandafter\expandafter{%
1434 \expandafter\@gobble\string#1\@empty
1435 }%
1436 }

```

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).

```

1437 \def\HyPsd@ifnextchar#1{%
1438 \pdfstringdefWarn#1%
1439 \expandafter\@gobbletwo\@gobble
1440 }

```

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`.

```

1441 \def\HyPsd@protected@testopt#1{%
1442 \pdfstringdefWarn#1%
1443 \@gobbletwo
1444 }

```

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:

```

1445 \def\HyPsd@Warning#1{%
1446 \begingroup
1447 \let\space\ltx@space
1448 \Hy@Warning{#1}%
1449 \endgroup
1450 }

```

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`.

```

1451 \let\HyPsd@fi\fi
1452 \def\HyPsd@ProtectSpaces#1{%
1453   \xdef#1{%
1454     \iftrue
1455       \expandafter\HyPsd@@ProtectSpacesFi
1456       \expandafter|\expandafter\@empty#1| %
1457       \HyPsd@fi
1458   }%
1459   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1460 }%
```

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

```

1461 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1462   \fi
1463   \unexpanded{#1}%
1464   \ifx\scrollmode#2\scrollmode
1465   \else
1466     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1467   \HyPsd@fi
1468 }%
```

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.

```

1469 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1470   \xdef#2{\unexpanded\expandafter{#1}}%
1471 }%
```

6.6.3 Remove grouping braces

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

```

1472 \def\HyPsd@RemoveBraces#1{%
1473   \ifx\scrollmode#1\scrollmode
1474   \else
1475     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1476   \fi
1477 }
```

`\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`.

```

1478 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1479   \fi
1480   \def\Hy@temp@A{#1#2}%
1481   \def\Hy@temp@B{#3}%
1482   \ifx\Hy@temp@A\Hy@temp@B
1483     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1484       \HyPsd@String#1%
1485     }%
1486     \ifx\scrollmode#2\scrollmode
1487       \else
1488         \Hy@ReturnAfterFiFiEnd{%
1489           \HyPsd@RemoveBraces{#2}%
1490         }%
1491       \fi
1492     \else
1493       \def\Hy@temp@A{#1}%
1494       \HyPsd@AppendItalcrr\HyPsd@String
1495       \ifx\Hy@temp@A\@empty
1496         \Hy@ReturnAfterElseFiFiEnd{%
1497           \HyPsd@RemoveBraces{#2}%
1498         }%
1499       \else
1500         \HyPsd@ProtectSpaces\Hy@temp@A
1501         \HyPsd@AppendItalcrr\Hy@temp@A
1502         \Hy@ReturnAfterFiFiEnd{%
1503           \expandafter\HyPsd@RemoveBraces\expandafter
1504             {\Hy@temp@A#2}%
1505         }%
1506       \fi
1507     \fi
1508   \Hy@ReturnEnd
1509 }
```

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

```

1510 \def\HyPsd@AppendItalcrr#1{%
1511   \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1%
1512 }
1513 \def\HyPsd@@AppendItalcrr#1#2{%
1514   \expandafter\def\expandafter#2\expandafter{#2#1}%
1515 }
```

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.luaotex.org/view.php?id=773>.

```

1516 \ltx@ifundefined{directlua}{%
1517 }{%
1518 \expandafter\ifx\csname\endcsname\relax\fi
1519 }

```

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.

```

1520 \begingroup
1521 \catcode`\Q=\active
1522 \let Q\ltx@empty
1523 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1524 \global\let\HyPsd@Rest\relax
1525 \ifcat\relax\noexpand#1\relax
1526 \ifx#1\protect
1527 \else
1528 \ifx#1\penalty
1529 \setbox\z@=\hbox{%
1530 \afterassignment\HyPsd@AfterCountRemove
1531 \count@=#2\HyPsd@End
1532 }%
1533 \else
1534 \ifx#1\kern
1535 \setbox\z@=\hbox{%
1536 \afterassignment\HyPsd@AfterDimenRemove
1537 \dimen@=#2\HyPsd@End
1538 }%
1539 \else
1540 \ifx#1\hskip
1541 \setbox\z@=\hbox{%
1542 \afterassignment\HyPsd@AfterSkipRemove
1543 \skip@=#2\HyPsd@End
1544 }%
1545 \else
1546 \HyPsd@CatcodeWarning{#1}%
1547 \fi
1548 \fi
1549 \fi
1550 \fi
1551 \else
1552 \ifcat\noexpand#1\noexpandQ% active character
1553 \expandafter\expandafter\expandafter\def

```

```

1554 \expandafter\expandafter\expandafter\HyPsd@String
1555 \expandafter\expandafter\expandafter{%
1556 \expandafter\HyPsd@String\string#1%
1557 }%
1558 \else
1559 \ifcat#1A% letter
1560 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1561 \HyPsd@String#1%
1562 }%
1563 \else
1564 \ifcat#1 % SPACE
1565 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1566 \HyPsd@String\HyPsd@SPACEOPTI
1567 }%
1568 \else
1569 \ifcat$#1%
1570 \HyPsd@CatcodeWarning{math shift}%
1571 \else
1572 \ifcat&#1%
1573 \HyPsd@CatcodeWarning{alignment tab}%
1574 \else
1575 \ifcat^#1%
1576 \HyPsd@CatcodeWarning{superscript}%
1577 \else
1578 \ifcat_#1%
1579 \HyPsd@CatcodeWarning{subscript}%
1580 \else
1581 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1582 \HyPsd@String#1%
1583 }%
1584 \fi
1585 \fi
1586 \fi
1587 \fi
1588 \fi
1589 \fi
1590 \fi
1591 \fi
1592 \ifx\HyPsd@Rest\relax
1593 \ifx\scrollmode#2\scrollmode
1594 \else
1595 \Hy@ReturnAfterFiFiEnd{%
1596 \HyPsd@CheckCatcodes#2\HyPsd@End
1597 }%
1598 \fi
1599 \else
1600 \ifx\HyPsd@Rest\@empty
1601 \else
1602 \Hy@ReturnAfterFiFiEnd{%
1603 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1604 }%
1605 \fi
1606 \fi
1607 \Hy@ReturnEnd

```

```

1608 }%
1609 \endgroup

```

Remove counts, dimens, skips.

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

```

1610 \def\HyPsd@AfterCountRemove#1\HyPsd@end{%
1611   \gdef\HyPsd@Rest{#1}%
1612 }

```

`\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.

```

1613 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
1614   \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1615     \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1616     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1617   \else
1618     \ifdim\dimen@=\z@
1619     \else
1620       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1621     \fi
1622     \gdef\HyPsd@Rest{#1}%
1623   \fi
1624 }

```

`\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).

```

1625 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1626   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1627     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1628     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1629   \else
1630     \ifdim\skip@=\z@
1631     \else
1632       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1633     \fi
1634     \gdef\HyPsd@Rest{#1}%
1635   \fi
1636 }

```

Catcode warnings.

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

```

1637 \def\HyPsd@CatcodeWarning#1{%
1638   \HyPsd@Warning{%
1639     Token not allowed in a PDF string (%
1640     \ifHy@unicode
1641       Unicode%
1642     \else
1643       PDFDocEncoding%
1644     \fi

```

```

1645 ):%
1646 \MessageBreak removing ``\HyPsd@RemoveCmdPrefix#1'%
1647 }%
1648 }
1649 \beginngroup
1650 \catcode`\|=0 %
1651 \catcode`\|=12 %
1652 |gdef|HyPsd@RemoveCmdPrefix#1{%
1653 |expandafter|HyPsd@@RemoveCmdPrefix
1654 |string#1|@empty\<>-|@empty|@empty
1655 }%
1656 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1657 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1658 \def\HyPsd@RemoveSpaceWarning#1{%
1659 \HyPsd@Warning{%
1660 Token not allowed in a PDF string (%)
1661 \ifHy@unicode
1662 Unicode%
1663 \else
1664 PDFDocEncoding%
1665 \fi
1666 ):%
1667 \MessageBreak #1\MessageBreak
1668 removed%
1669 }%
1670 }

```

\HyPsd@ReplaceSpaceWarning

```

1671 \def\HyPsd@ReplaceSpaceWarning#1{%
1672 \HyPsd@Warning{%
1673 Token not allowed in a PDF string (%)
1674 \ifHy@unicode
1675 Unicode%
1676 \else
1677 PDFDocEncoding%
1678 \fi
1679 ):%
1680 \MessageBreak #1\MessageBreak
1681 replaced by space%
1682 }%
1683 }

```

6.6.5 Check for wrong glyphs

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

```

1684 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1685 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1686 \HyPsd@String#1%
1687 }%
1688 \ifx\|#2\%
1689 \else

```



```

1690 \ltx@ReturnAfterFi{%
1691 \HyPsd@GlyphProcessWarning#2\@empty
1692 }%
1693 \fi
1694 }
1695 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1696 \HyPsd@@@GlyphProcessWarning#1++>%
1697 \HyPsd@GlyphProcess#2\@empty
1698 }
1699 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
1700 \ifx\#2\%
1701 \HyPsd@Warning{%
1702 Glyph not defined in %
1703 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1704 removing \@backslashchar#1'%
1705 }%
1706 \else
1707 \HyPsd@Warning{%
1708 Composite letter \@backslashchar#1+#2'\MessageBreak
1709 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1710 \MessageBreak
1711 removing \@backslashchar#1'%
1712 }%
1713 \fi
1714 }

```

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`.

```

1715 \def\HyPsd@spaceopti#1{ % first space
1716 \ifx\HyPsd@spaceopti#1%
1717 \040%
1718 \else
1719 #1%
1720 \fi
1721 }%

```

6.6.6 Replacing tokens

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

```

#1 Exact the tokens that should be replaced.
#2 The replacement (don't need to be expanded).
#3 Command with the string.
1722 \def\HyPsd@Subst#1#2#3{%
1723 \def\HyPsd@@@ReplaceFi##1#1##2\END\fi{%
1724 \fi
1725 ##1%
1726 \ifx\scrollmode##2\scrollmode

```

```

1727 \else
1728   #2%
1729   \HyPsd@@ReplaceFi##2\END
1730 \fi
1731 }%
1732 \xdef#3{%
1733   \iftrue
1734     \expandafter\HyPsd@@ReplaceFi#3#1\END
1735   \fi
1736 }%
1737 }

```

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

```

1738 \def\HyPsd@StringSubst#1{%
1739   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1740 }

```

`\HyPsd@EscapeTeX`

```

1741 \begingroup
1742 \lccode`!=`\\%%
1743 \lccode`|=`\\%%
1744 \lccode`\(=`{\%
1745 \lccode`\)=`}%
1746 \lccode`0=\ltx@zero
1747 \lccode`1=\ltx@zero
1748 \lccode`3=\ltx@zero
1749 \lccode`4=\ltx@zero
1750 \lccode`5=\ltx@zero
1751 \lccode`7=\ltx@zero
1752 \lowercase{\endgroup
1753 \def\HyPsd@EscapeTeX#1{%
1754   \HyPsd@Subst!{|045}#1%
1755   \HyPsd@Subst({|173}#1%
1756   \HyPsd@Subst){|175}#1%
1757 }%
1758 }

```

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.

```

1759 \def\HyPsd@doxspace#1{%
1760   \ifx#1\relax\else
1761     \ifx#1.\else
1762       \ifx#1:\else
1763         \ifx#1,\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     \HyPsd@SPACEOPTI
1771     \fi
1772     \fi
1773     \fi
1774     \fi
1775     \fi
1776     \fi
1777     \fi
1778     \fi
1779     \fi
1780     \fi
1781     #1%
1782 }%

```

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.

```

1783 \begingroup
1784 \catcode`\|=0 %
1785 \catcode`\|=12 %

```

\HyPsd@ConvertToUnicode

```

1786 |gdef|HyPsd@ConvertToUnicode#1{%
1787 |xdef#1{%
1788 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1789 }%
1790 |ifx#1|@empty
1791 |else
1792 |xdef#1{%
1793 \376\377%
1794 #1%
1795 }%
1796 |fi
1797 }%

```

\HyPsd@DoConvert

```

1798 |gdef|HyPsd@DoConvert#1{%
1799 |ifx#1|@empty
1800 |else
1801 |ltx@ReturnAfterFi{%
1802 |ifx#1\%%
1803 \%%
1804 |expandafter|HyPsd@DoEscape
1805 |else
1806 |HyPsd@Char{#1}%
1807 |expandafter|HyPsd@DoConvert
1808 |fi
1809 }%
1810 |fi
1811 }%

```

\HyPsd@DoEscape

```

1812 |gdef|HyPsd@DoEscape#1{%
1813   |ifx#19%
1814   |expandafter|HyPsd@GetTwoBytes
1815   |else
1816   |ltx@ReturnAfterFi{%
1817   |ifx#18%
1818     00%
1819   |expandafter|HyPsd@GetTwoBytes
1820   |else
1821     #1%
1822   |expandafter|HyPsd@GetOneByte
1823   |fi
1824 }%
1825 |fi
1826 }%

```

\HyPsd@GetTwoBytes

```

1827 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1828   #1\#2#3#4%
1829   |HyPsd@DoConvert
1830 }%

```

\HyPsd@GetOneByte

```

1831 |gdef|HyPsd@GetOneByte#1#2{%
1832   #1#2%
1833   |HyPsd@DoConvert
1834 }%
1835 |endgroup

```

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

```

1836 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1837   \xdef#4{#4#1#2}%
1838   \HyPsd@@ConvertToUnicode#3\END#4%
1839 }

```

\HyPsd@Char

```

1840 \begingroup
1841   \catcode0=9 %
1842   \catcode`\^=7 %
1843   \catcode`\^^=12 %
1844   \def\x{^^^0000}%
1845   \expandafter\endgroup
1846   \ifx\x\@empty
1847     \def\HyPsd@Char#1{%
1848       \ifnum`#1<128 %
1849         \@backslashchar 000#1%
1850       \else
1851         \ifnum`#1<65536 %
1852           \expandafter\HyPsd@CharTwoByte\number`#1!%
1853         \else
1854           \expandafter\expandafter\expandafter\HyPsd@CharSurrogate

```

```

1855     \intcalcSub{`#1}{65536}!%
1856   \fi
1857 \fi
1858 }%
1859 \def\HyPsd@CharTwoByte#1!{%
1860   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1861   \IntCalcDiv#1!256!!%
1862   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1863   \IntCalcMod#1!256!!%
1864 }%
1865 \def\HyPsd@CharOctByte#1!{%
1866   \@backslashchar
1867   \IntCalcDiv#1!64!%
1868   \intcalcDiv{\IntCalcMod#1!64!}{8}%
1869   \IntCalcMod#1!8!%
1870 }%
1871 \def\HyPsd@CharSurrogate#1!{%
1872   \@backslashchar 33%
1873   \IntCalcDiv#1!262144!%
1874   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1875   \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1876   \@backslashchar 33%
1877   \expandafter\expandafter\expandafter\IntCalcAdd
1878   \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1879   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1880   \IntCalcMod#1!256!!%
1881 }%
1882 \else
1883 \def\HyPsd@Char#1{%
1884   \@backslashchar 000#1%
1885 }%
1886 \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.

```

1887 \ifcsname UTFviii@loop\endcsname
1888 \def\HyPsd@expand@utfvii{%
1889   \count@"C2
1890   \@tempcnta"F5
1891   \def\UTFviii@tmp{\expandafter\def\expandafter~\expandafter{~}}%
1892   \UTFviii@loop
1893 }
1894 \else
1895 \def\HyPsd@expand@utfvii{}
1896 \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

1897 \begingroup
1898 \lccode\~=`^^f4\relax
1899 \lowercase{\endgroup
1900 \def\HyPsd@UTFviii{%
1901   \HyPsd@expand@utfvii
1902   \let\UTFviii@two@octets\HyPsd@UTFviii@two
1903   \let\UTFviii@three@octets\HyPsd@UTFviii@three
1904   \let\UTFviii@four@octets\HyPsd@UTFviii@four
1905   \ifx~\HyPsd@UTFviii@ccxliv@undef
1906     \let~\HyPsd@UTFviii@ccxliv@def
1907   \fi
1908   \let\unichar\HyPsd@unichar
1909 }%
1910 }%
1911 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1912 \edef\HyPsd@UTFviii@ccxliv@def{%
1913   \noexpand\UTFviii@four@octets\string ^^f4%
1914 }%

```

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.

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

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

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

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

$$(5)$$

```

1915 \def\HyPsd@UTFviii@two#1#2{%
1916   \expandafter\HyPsd@UTFviii@@two
1917   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
1918   \number`#1\expandafter| %
1919   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter| %
1920   \number`#2 \@nil
1921 }%
1922 \def\HyPsd@UTFviii@@two#1|#2|#3|#4|\@nil{%
1923   \expandafter\8%
1924   \number\numexpr #1-48\expandafter\relax
1925   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1926   \number\numexpr #3-8*%
1927   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1928   \number\numexpr #4-8*#3\relax
1929 }%

```

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

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

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

```

1930 \def\HyPsd@UTFviii@three#1#2#3{%
1931   \expandafter\HyPsd@UTFviii@@three
1932   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
1933   \number`#1\expandafter|
1934   \number\ifnum\dimexpr`#2-128\relax <32 0\else 1\fi\expandafter|
1935   \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|
1936   \number`#2\expandafter|
1937   \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter|
1938   \number`#3 \@nil
1939 }%
1940 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1941   \expandafter\9%
1942   \number\dimexpr #1-56\expandafter\relax
1943   \number\dimexpr 2*(#2-4*#1)+#3\expandafter\relax
1944   \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1945   \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
1946   \number\dimexpr #6-16\expandafter\relax
1947   \number\dimexpr #7-8*#6\relax
1948 }%

```

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

```

```

1949 \def\HyPsd@UTFviii@four#1#2{%
1950   \expandafter\HyPsd@@UTFviii@four\number
1951   \numexpr-1+(`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
1952   \expandafter|\number
1953   \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp|
1954 }%
1955 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1956   \933\dimexpr.25\dimexpr`#1sp\relax\relax
1957   \csname\dimexpr`#1-4*\dimexpr.25\dimexpr`#1sp\endcsname
1958   \ifodd#2 %
1959     \number\dimexpr(#2-1)/2\relax
1960   \else
1961     \number\dimexpr#2/2\relax
1962   \fi
1963   \number\dimexpr\ifodd#2 4+\fi
1964   \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
1965   \933%
1966   \expandafter\HyPsd@@@UTFviii@four\number
1967   \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp|

```

```

1968 }%
1969 \def\HyPsd@@@UTFviii@four#1|#2{%
1970   \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1971   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1972   \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
1973   \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
1974 }%

```

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

```

1975 \def\HyPsd@unichar#1{%
1976   \ifHy@unicode
1977     \ifnum#1>"10FFFF %
1978       \HyPsd@UnicodeReplacementCharacter % illegal
1979     \else
1980       \ifnum#1>"FFFF %

```

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

```

1981   \expandafter\HyPsd@unichar\expandafter{%
1982     \number\numexpr 55296+%
1983     \dimexpr.0009765625\dimexpr\number#1sp-\p@
1984     \relax\relax\relax
1985   }%

```

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

```

1986   \expandafter\HyPsd@unichar\expandafter{%
1987     \number\numexpr#1-9216%
1988     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1989     \relax\relax\relax
1990   }%
1991   \else
1992     \ifnum#1>"7FFF %
1993       \9%
1994       \expandafter\HyPsd@unichar@first@byte\expandafter{%
1995         \number
1996         \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1997       }%
1998     \else
1999       \8%
2000       \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2001     \fi
2002     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2003       \number
2004       \numexpr#1-256*\number
2005       \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2006     }%
2007     \fi
2008     \fi
2009   \else
2010     .% unsupported (Unicode -> PDF Doc Encoding)
2011     \fi
2012   }%
2013 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2014 \def\HyPsd@unichar@first@byte#1{%
2015   \number\dimexpr.015625\dimexpr#1sp\relax\relax

```



```

2016 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2017 \number
2018 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2019 \relax\relax\relax
2020 }%
2021 }%
2022 \def\HyPsd@unichar@second@byte#1{%
2023 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2024 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2025 \number
2026 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2027 \relax\relax\relax
2028 }%
2029 }%
2030 \def\HyPsd@unichar@octtwo#1{%
2031 \number\dimexpr.125\dimexpr#1sp\relax\relax
2032 \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2033 \relax\relax\relax
2034 }%

```

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

```

2035 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2036 \ifx\@gobble#1%
2037 \else
2038 [Please insert \textbackslash PrerenderUnicode%
2039 \textbraceleft#1\textbraceright\space
2040 into preamble]%
2041 \fi
2042 }%

```

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.

```

2043 \def\HyPsd@DieFace#1{%
2044 \ifHy@unicode
2045 \ifnum#1<1 %
2046 \HyPsd@UnicodeReplacementCharacter
2047 \else
2048 \ifnum#1>6 %
2049 \9046\205%
2050 \expandafter\expandafter\expandafter
2051 \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2052 \else
2053 \9046\20\intcalcDec{#1}%
2054 \fi

```

```

2055 \fi
2056 \else
2057 .% Die faces are not part of PDFDocEncoding
2058 \fi
2059 }

```

\HyPsd@DieFaceLarge

```

2060 \def\HyPsd@DieFaceLarge#1{%
2061 \ifnum#1>6 %
2062 \expandafter\ltx@firstoftwo
2063 \else
2064 \expandafter\ltx@secondoftwo
2065 \fi
2066 {%
2067 \9046\205%
2068 \expandafter\expandafter\expandafter
2069 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2070 }{%
2071 \9046\20\IntCalcDec#1!%
2072 }%
2073 }

```

6.6.11 Support for moon phases of package china2e

```

2074 \def\HyPsd@MoonPha#1{%
2075 \ifcase\intcalcNum{#1} %
2076 \HyPsd@UnicodeReplacementCharacter
2077 \or % 1
2078 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2079 \9330\074\9337\032%
2080 \or % 2
2081 \HyPsd@UnicodeReplacementCharacter
2082 \or % 3
2083 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2084 \9330\074\9337\035%
2085 \or % 4
2086 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2087 \9330\074\9337\034%
2088 \else
2089 \HyPsd@UnicodeReplacementCharacter
2090 \fi
2091 }
2092 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2093 \def\HyPsd@ding#1{%
2094 \ifHy@unicode
2095 \ifnum#1<32 %
2096 \HyPsd@UnicodeReplacementCharacter
2097 \else
2098 \ifnum#1>254 %
2099 \HyPsd@UnicodeReplacementCharacter
2100 \else

```

```

2101     \ifnum#1<127 %
2102         \expandafter\expandafter\expandafter
2103         \HyPsd@@ding\intcalcNum{#1}!%
2104     \else
2105         \ifnum#1>160 %
2106             \expandafter\expandafter\expandafter
2107             \HyPsd@@ding\intcalcNum{#1}!%
2108         \else
2109             \HyPsd@UnicodeReplacementCharacter
2110         \fi
2111     \fi
2112 \fi
2113 \fi
2114 \else
2115     .% Dingbats are not part of PDFDocEncoding
2116 \fi
2117 }

```

\HyPsd@@ding

```

2118 \def\HyPsd@@ding#1!{%
2119     \ltx@ifundefined{HyPsd@ding@#1}{%
2120         \ifnum#1<127 %
2121             \9047%
2122             \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2123         \else
2124             \ifnum#1<168 %
2125                 \9047\14\IntCalcSub#1!160!%
2126             \else
2127                 \ifnum#1>181 %
2128                     \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2129                 \else
2130                     % 172..181 -> U+2460..U+2469
2131                     \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2132                 \fi
2133             \fi
2134         \fi
2135     }{%
2136         \csname HyPsd@ding@#1\endcsname
2137     }%
2138 }

2139 \@namedef{HyPsd@ding@32}{\space}
2140 % U+260E BLACK TELEPHONE
2141 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2142 % U+261B BLACK RIGHT POINTING INDEX
2143 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2144 % U+261E WHITE RIGHT POINTING INDEX
2145 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2146 % U+2605 BLACK STAR
2147 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2148 % U+25CF BLACK CIRCLE
2149 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2150 % U+25A0 BLACK SQUARE
2151 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0

```

```

2152 % U+25B2 BLACK UP-POINTING TRIANGLE
2153 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2154 % U+25BC BLACK DOWN-POINTING TRIANGLE
2155 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2156 % U+25C6 BLACK DIAMOND
2157 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2158 % U+25D7 RIGHT HALF BLACK CIRCLE
2159 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2160 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2161 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2162 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2163 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2164 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2165 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2166 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2167 \@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.

```

2168 \ifpackageloaded{subfigure}{%
2169   \ltx@ifundefined{sub@label}{%
2170     \Hy@hypertextnamesfalse
2171   }{%
2172     \renewcommand*{\sub@label}[1]{%
2173       \@bsphack
2174       \subfig@oldlabel{#1}%
2175       \if@filesw
2176         \begingroup
2177           \edef\@currentlabstr{%
2178             \expandafter\strip@prefix\meaning\@currentlabelname
2179           }%
2180           \protected@write\@auxout{}{%
2181             \string\newlabel{sub@#1}{%
2182               {\@nameuse{@@thesub\@cuptype}}%
2183               {\thepage}%
2184             }%
2185             \expandafter\strip@period\@currentlabstr
2186             \relax.\relax\@@@%
2187           }%
2188           {\@currentHref}%
2189           {}%
2190         }%
2191       }%
2192     \endgroup
2193   \fi
2194   \@esphack
2195 }%
2196 }%
2197 }{}

```

7.2 Package xr and xr-hyper

The beta version of xr that supports \XR@addURL is called **xr-hyper**. If reading external aux files check whether they have a non zero fourth field in \newlabel and if so, add the URL as the fifth field. Change 2023-05-14: xr-hyper adds the field.

```
2198 \def\Hy@true{true}
2199 \def\Hy@false{false}
```

Providing dummy definitions.

```
2200 \let\literalps@out\@gobble
2201 \newcommand\pdfbookmark[3][]{ }
2202 \def\Acrobatmenu#1#2{\leavevmode#2}
2203 \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

```
2204 \let\HyperRaiseLinkHook\@empty
2205 \def\HyperRaiseLinkDefault{\baselineskip}
```

\HyperRaiseLinkHook allows the user to reassign \HyperRaiseLinkLength.

```
2206 \newcount\Hy@SavedSpaceFactor
2207 \def\Hy@SaveSpaceFactor{%
2208   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2209 }
2210 \def\Hy@RestoreSpaceFactor{%
2211   \relax
2212   \ifhmode
2213     \ifnum\Hy@SavedSpaceFactor>\z@
2214       \spacefactor=\Hy@SavedSpaceFactor
2215     \fi
2216   \fi
2217 }
2218 \def\Hy@SaveSavedSpaceFactor{%
2219   \edef\Hy@RestoreSavedSpaceFactor{%
2220     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2221   }%
2222 }
2223 \def\Hy@raisedlink#1{%
2224   \ifvmode
```

```

2225   #1%
2226   \else
2227     \Hy@SaveSpaceFactor
2228     \penalty\@M
2229     \smash{%
2230       \begingroup
2231         \let\HyperRaiseLinkLength\@tempdima
2232         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2233         \HyperRaiseLinkHook
2234       \expandafter\endgroup
2235       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2236         \Hy@RestoreSpaceFactor
2237         #1%
2238         \Hy@SaveSpaceFactor
2239       }%
2240     }%
2241     \Hy@RestoreSpaceFactor
2242   \fi
2243 }

```

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

```

2244 \def\Hy@SaveLastskip{%
2245   \let\Hy@RestoreLastskip\relax
2246   \ifvmode
2247     \ifdim\lastskip=\z@
2248       \ifnum\lastnodetype=1 %
2249         \let\Hy@RestoreLastskip\relax
2250       \else
2251         \let\Hy@RestoreLastskip\nobreak
2252       \fi
2253     \else
2254       \begingroup
2255         \skip@=-\lastskip
2256         \edef\x{%
2257           \endgroup
2258           \def\noexpand\Hy@RestoreLastskip{%
2259             \noexpand\ifvmode
2260               \noexpand\nobreak
2261               \vskip\the\skip@
2262               \vskip\the\lastskip\relax
2263             \noexpand\fi
2264           }%
2265         }%
2266       \x
2267     \fi
2268   \else
2269     \ifhmode
2270       \ifdim\lastskip=\z@
2271         \let\Hy@RestoreLastskip\nobreak
2272       \else
2273         \begingroup
2274           \skip@=-\lastskip
2275           \edef\x{%
2276             \endgroup

```

```

2277     \def\noexpand\Hy@RestoreLastskip{%
2278         \noexpand\ifhmode
2279         \noexpand\nobreak
2280         \hskip\the\skip@
2281         \hskip\the\lastskip\relax
2282     \noexpand\fi
2283 }%
2284 }%
2285 \x
2286 \fi
2287 \fi
2288 \fi
2289 }%

```

9 Options

```

2290 \SetupKeyvalOptions{%
2291     family=Hyp,%
2292     prefix=HyOpt%
2293 }

```

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
2294 \ExplSyntaxOn
2295 \@ifundefined{AddToDocumentProperties}
2296 {
2297     \prop_new:N \g__hyp_documentproperties_prop
2298     \NewDocumentCommand\AddToDocumentProperties{O{\currname}mm}
2299     {
2300         \exp_args:NNx
2301         \prop_gput:Nnn \g__hyp_documentproperties_prop
2302         {
2303             \tl_if_blank:eTF {#1}{top-level/}{#1/} #2
2304         }
2305         { #3}
2306     }
2307     \NewExpandableDocumentCommand\GetDocumentProperties{m}
2308     {
2309         \prop_item:Nn \g__hyp_documentproperties_prop {#1}
2310     }
2311 }{}
2312 \ExplSyntaxOff

\IfHyperBooleanExists
2313 \def\IfHyperBooleanExists#1{%
2314     \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2315         \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2316     }%
2317 }

```

```

2318 \@namedef{KV@Hyp@stoppeearly@default}{}}

\IfHyperBoolean
2319 \def\IfHyperBoolean#1{%
2320   \IfHyperBooleanExists{#1}{%
2321     \csname ifHy@#1\endcsname
2322     \expandafter\ltx@firstoftwo
2323   \else
2324     \expandafter\ltx@secondoftwo
2325   \fi
2326 } \ltx@secondoftwo
2327 }

\Hy@boolkey
2328 \def\Hy@boolkey#1#2{%
2329   \edef\Hy@tempa{#2}%
2330   \lowercase\expandafter{%
2331     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2332   }%
2333   \ifx\Hy@tempa\@empty
2334     \let\Hy@tempa\Hy@true
2335   \fi
2336   \ifx\Hy@tempa\Hy@true
2337   \else
2338     \ifx\Hy@tempa\Hy@false
2339     \else
2340       \let\Hy@tempa\relax
2341     \fi
2342   \fi
2343   \ifx\Hy@tempa\relax
2344     \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2345   \else
2346     \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2347     \csname Hy@#1\Hy@tempa\endcsname
2348   \fi
2349 }

\Hy@WarnOptionValue
2350 \def\Hy@WarnOptionValue#1#2#3{%
2351   \Hy@Warning{%
2352     Unexpected value `#1'\MessageBreak
2353     of option `#2' instead of\MessageBreak
2354     #3%
2355   }%
2356 }

\Hy@DisableOption
2357 \def\Hy@DisableOption#1{%
2358   \ltx@ifundefined{KV@Hyp@#1@default}{%
2359     \define@key{Hyp}{#1}%
2360   }{%
2361     \define@key{Hyp}{#1}[]%
2362   }%
2363   {\Hy@WarnOptionDisabled{#1}}%

```



```

2364 }
2365

```

`\Hy@WarnOptionDisabled`

```

2366 \def\Hy@WarnOptionDisabled#1{%
2367   \Hy@Warning{%
2368     Option `#1' has already been used,\MessageBreak
2369     setting the option has no effect%
2370   }%
2371 }

```

`\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`.

```

2372 \def\Hy@CheckOptionValue#1#2#3{%
2373   \begingroup
2374   \edef\x{#1}%
2375   \@onelevel@sanitize\x
2376   \let\y=y%
2377   \def\do##1##2{%
2378     \def\z{##1}%
2379     \@onelevel@sanitize\z
2380     \ifx\x\z
2381       \let\y=n%
2382       \let\do\@gobbletwo
2383     \fi
2384   }%
2385   #3%
2386   \ifx\y y%
2387     \def\do##1##2{%
2388       * `##1'%
2389       \ifx\\##2\\\else\space(##2)\fi
2390     \MessageBreak
2391   }%
2392   \Hy@Warning{%
2393     Values of option `#2':\MessageBreak
2394     #3%
2395     * An empty value disables the option.\MessageBreak
2396     Unknown value `#1'%
2397   }%
2398   \fi
2399 \endgroup
2400 }

```

`\Hy@DefNameKey` `#1`: option name

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

```

2401 \def\Hy@DefNameKey#1{%
2402   \expandafter\Hy@@@DefNameKey\csname @#1\endcsname{#1}%
2403 }

```

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

`#2`: option name

`#3`: `\do` list with known values.

```

2404 \def\Hy@@DefNameKey#1#2#3{%
2405   \define@key{Hyp}{#2}{%
2406     \edef#1{##1}%
2407     \ifx#1\@empty
2408       \else
2409         \Hy@CheckOptionValue{##1}{#2}{#3}%
2410       \fi
2411     }%
2412   \let#1\@empty
2413 }

```

\Hy@UseNameKey

```

2414 \def\Hy@UseNameKey#1#2{%
2415   \ifx#2\@empty
2416     \else
2417       /#1/#2%
2418     \fi
2419 }

```

9.2 Defining the options

```

2420 \define@key{Hyp}{implicit}[true]{%
2421   \Hy@boolkey{implicit}{#1}%
2422 }
2423 \define@key{Hyp}{draft}[true]{%
2424   \Hy@boolkey{draft}{#1}%
2425 }
2426 \define@key{Hyp}{final}[true]{%
2427   \Hy@boolkey{final}{#1}%
2428 }
2429 \let\KV@Hyp@nolinks\KV@Hyp@draft
2430 \def\Hy@ObsoletePaperOption#1{%
2431   \Hy@WarningNoLine{%
2432     Option `#1' is no longer used%
2433   }%
2434   \define@key{Hyp}{#1}[true]{}%
2435 }
2436 \def\Hy@temp#1{%
2437   \define@key{Hyp}{#1}[true]{%
2438     \Hy@ObsoletePaperOption{#1}%
2439   }%
2440 }
2441 \Hy@temp{a4paper}
2442 \Hy@temp{a5paper}
2443 \Hy@temp{b5paper}
2444 \Hy@temp{letterpaper}
2445 \Hy@temp{legalpaper}
2446 \Hy@temp{executivepaper}
2447 \define@key{Hyp}{setpagesize}[true]{%
2448   \Hy@boolkey{setpagesize}{#1}%
2449 }
2450 \define@key{Hyp}{debug}[true]{%
2451   \Hy@boolkey{debug}{#1}%

```

```

2452 }
2453 \define@key{Hyp}{linktocpage}[true]{%
2454   \Hy@boolkey{linktocpage}{#1}%
2455   \ifHy@linktocpage
2456     \let\Hy@linktoc\Hy@linktoc@page
2457   \else
2458     \let\Hy@linktoc\Hy@linktoc@section
2459   \fi
2460 }
2461 \chardef\Hy@linktoc@none=0 %
2462 \chardef\Hy@linktoc@section=1 %
2463 \chardef\Hy@linktoc@page=2 %
2464 \chardef\Hy@linktoc@all=3 %
2465 \ifHy@linktocpage
2466   \let\Hy@linktoc\Hy@linktoc@page
2467 \else
2468   \let\Hy@linktoc\Hy@linktoc@section
2469 \fi
2470 \define@key{Hyp}{linktoc}{%
2471   \@ifundefined{Hy@linktoc@#1}{%
2472     \Hy@Warning{%
2473       Unexpected value `#1' of\MessageBreak
2474       option `linktoc' instead of `none',\MessageBreak
2475       `section', `page' or `all'%
2476     }%
2477   }{%
2478     \expandafter\let\expandafter\Hy@linktoc
2479     \csname Hy@linktoc@#1\endcsname
2480   }%
2481 }
2482 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2483 \let\XR@ext\relax
2484 \define@key{Hyp}{verbose}[true]{%
2485   \Hy@boolkey{verbose}{#1}%
2486 }

```

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.

```

2487 \define@key{Hyp}{raiselinks}[true]{%
2488   \Hy@boolkey{raiselinks}{#1}%
2489 }

```

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

```

2490 \def\Hy@setbreaklinks#1{%
2491   \csname breaklinks#1\endcsname
2492 }
2493 \def\Hy@breaklinks@unsupported{%
2494   \ifx\Hy@setbreaklinks\@gobble
2495     \ifHy@breaklinks
2496       \Hy@WarningNoLine{%
2497         You have enabled option `breaklinks'.\MessageBreak
2498         But driver ``\Hy@driver.def' does not support this.\MessageBreak
2499         Expect trouble with the link areas of broken links%

```

```

2500     }%
2501     \fi
2502 \fi
2503 }

2504 \define@key{Hyp}{breaklinks}[true]{%
2505   \Hy@boolkey{breaklinks}{#1}%
2506   \let\Hy@setbreaklinks\@gobble
2507 }

2508 \define@key{Hyp}{localanchorname}[true]{%
2509   \Hy@WarningNoLine{%
2510     Option `localanchorname' is deprecated%
2511   }%
2512   \Hy@boolkey{localanchorname}{#1}%
2513 }

```

Determines whether an automatic anchor is put on each page

```

2514 \define@key{Hyp}{pageanchor}[true]{%
2515   \Hy@boolkey{pageanchor}{#1}%
2516 }

```

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.

```

2517 \define@key{Hyp}{plainpages}[true]{%
2518   \Hy@boolkey{plainpages}{#1}%
2519 }

```

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

```

2520 \define@key{Hyp}{naturalnames}[true]{%
2521   \Hy@boolkey{naturalnames}{#1}%
2522 }

```

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

```

2523 \define@key{Hyp}{hypertextnames}[true]{%
2524   \Hy@boolkey{hypertextnames}{#1}%
2525 }

```

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

```

2526 \define@key{Hyp}{nesting}[true]{%
2527   \Hy@boolkey{nesting}{#1}%
2528 }

```

```

2529 \define@key{Hyp}{destlabel}[true]{%
2530   \Hy@boolkey{destlabel}{#1}%
2531 }

```

```

2532 \define@key{Hyp}{unicode}[true]{%
2533   \Hy@boolkey{unicode}{#1}%
2534   \ifHy@unicode
2535     \def\HyPsd@pdfencoding{unicode}%
2536     \HyPsd@LoadUnicode
2537   \else
2538     \def\HyPsd@pdfencoding{pdfdoc}%
2539   \fi
2540 }

```

```

2541 \Hy@AtBeginDocument{%
2542   \ifx\HyPsd@LoadUnicode\relax
2543   \else
2544     \def\HyPsd@LoadUnicode{%
2545       \Hy@Error{%
2546         Unicode support for bookmarks is not available.\MessageBreak
2547         Activate unicode support by using one of the options\MessageBreak
2548         `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2549         in the preamble%
2550       }\@ehc
2551       \global\let\HyPsd@LoadUnicode\relax
2552       \global\Hy@unicodetrue
2553       \global\let\Hy@unicodetrue\Hy@unicodetrue
2554     }%
2555   \fi
2556 }

2557 \define@key{Hyp}{pdfencoding}{%
2558   \edef\HyPsd@temp{#1}%
2559   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2560     \let\HyPsd@pdfencoding\HyPsd@temp
2561     \Hy@unicodetrue
2562   \else
2563     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2564       \z@
2565     \else
2566       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2567         \z@
2568       \else
2569         \@ne
2570       \fi
2571     \fi
2572     \let\HyPsd@pdfencoding\HyPsd@temp
2573     \hypersetup{unicode}%
2574     \ifHy@unicode
2575       \def\HyPsd@pdfencoding{#1}%
2576       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2577         \HyPsd@LoadStringEnc
2578       \fi
2579     \else
2580       \Hy@Warning{Cannot switch to unicode bookmarks}%
2581       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2582     \fi
2583   \else
2584     \@onelevel@sanitize\HyPsd@temp
2585     \Hy@Warning{%
2586       Values of option `pdfencoding':\MessageBreak
2587       `pdfdoc', `unicode', `auto'.\MessageBreak
2588       Ignoring unknown value ``\HyPsd@temp'%
2589     }%
2590   \fi
2591 \fi
2592 }
2593 \def\HyPsd@pdfencoding@auto{auto}
2594 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}

```

```

2595 \def\HyPsd@pdfencoding@unicode{unicode}

change 2020-08-14, use unicode by default:
2596 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
2597 \HyPsd@LoadUnicode
2598 \def\HyPsd@LoadStringEnc{%
2599   \RequirePackage{stringenc}[2009/12/15]%
2600   \let\HyPsd@LoadStringEnc\relax
2601 }
2602 \Hy@AtBeginDocument{%
2603   \ifpackageloaded{stringenc}{%
2604     \let\HyPsd@LoadStringEnc\relax
2605   }{%
2606     \def\HyPsd@LoadStringEnc{%
2607       \Hy@WarningNoLine{%
2608         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
2609         in the preamble or load the package there%
2610       }%
2611     }%
2612   }%
2613 }
2614 \define@key{Hyp}{psdextra}[true]{%
2615   \Hy@boolkey{psdextra}{#1}%
2616   \HyPsd@LoadExtra
2617 }
2618 \def\hypersetup{\kvsetkeys{Hyp}}
2619 \newif\ifHy@setpdfversion
2620 \define@key{Hyp}{pdfversion}{%
2621   \ifundefined{Hy@pdfversion@#1}{%
2622     \PackageWarning{hyperref}{%
2623       Unsupported PDF version `#1'.\MessageBreak
2624       Valid values: 1.2-1.7, 2.0%
2625     }%
2626   }{%
2627     \Hy@setpdfversiontrue
2628     \@nameuse{Hy@pdfversion@#1}%
2629   }%
2630 }

\Hy@pdfminorversion already used elsewhere to denote \pdfminorversion or
\pdfvariable majorversion} so introduce new names here.
2631 \@namedef{Hy@pdfversion@1.2}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{2}}%
2632 \@namedef{Hy@pdfversion@1.3}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{3}}%
2633 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{4}}%
2634 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{5}}%
2635 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{6}}%
2636 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{7}}%

```

```

2637 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
      norversion{0}}%
2638 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{5}

```

Legacy name, earlier releases assumed 1.x

```

2639 \let\Hy@pdfversion\Hy@pdf@minorversion
2640 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
      norversion\relax}
2641 \def\Hy@pdfmajorminor@version{\numexpr100*\Hy@pdfmajorversion+\Hy@pdfmi-
      norversion\relax}

```

if pdfminorversion is defined, make sure pdfmajorversion is too.

```

2642 \@ifundefined{pdfminorversion}{}{%
2643 \@ifundefined{pdfmajorversion}{}%
2644 \newcount\pdfmajorversion
2645 \pdfmajorversion=1
2646 }{}%
2647 }
2648 \ifx\pdfmajorversion\undefined\else
2649 \def\Hy@pdfmajorversion{\pdfmajorversion}
2650 \fi

```

10 Options for different drivers

```

2651 \newif\ifHy@DviMode
2652 \let\Hy@DviErrMsg\ltx@empty
2653 \ifpdf
2654 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2655 \else
2656 \ifxetex
2657 \def\Hy@DviErrMsg{XeTeX is running}%
2658 \else
2659 \ifvtex
2660 \ifnum\OpMode=\z@
2661 \Hy@DviModetrue
2662 \else
2663 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2664 \fi
2665 \else
2666 \Hy@DviModetrue
2667 \fi
2668 \fi
2669 \fi
2670 \def\HyOpt@CheckDvi#1{%
2671 \ifHy@DviMode
2672 \expandafter\ltx@firstofone
2673 \else
2674 \Hy@Error{%
2675 Wrong DVI mode driver option `#1',\MessageBreak
2676 because \Hy@DviErrMsg
2677 } \@ehc
2678 \expandafter\ltx@gobble
2679 \fi
2680 }
2681 \DeclareVoidOption{tex4ht}{}%

```

```

2682 \Hy@texhttrue
2683 \kvsetkeys{Hyp}{colorlinks=true}%
2684 \def\BeforeTeXIVht{\RequirePackage{color}}%
2685 \def\Hy@driver{htex4ht}%
2686 \def\MaybeStopEarly{%
2687   \Hy@Message{Stopped early}%
2688   \Hy@AtBeginDocument{%
2689     \PDF@FinishDoc
2690     \gdef\PDF@FinishDoc{}}%
2691   }%
2692   \endinput
2693 }%
2694 }
2695 \DeclareVoidOption{pdftex}{%
2696   \ifpdf
2697     \def\Hy@driver{hpdftex}%
2698     \PassOptionsToPackage{pdftex}{color}%
2699   \else
2700     \Hy@Error{%
2701       Wrong driver option `pdftex',\MessageBreak
2702       because pdfTeX in PDF mode is not detected%
2703     }\@ehc
2704   \fi
2705 }
2706 \DeclareVoidOption{luatex}{%
2707   \ifpdf
2708     \ifx\pdfextension\@undefined
2709       \def\Hy@driver{hpdftex}%
2710       \PassOptionsToPackage{pdftex}{color}%
2711     \else
2712       \def\Hy@driver{hluatex}%
2713       \PassOptionsToPackage{luatex}{color}%
2714     \fi
2715   \else
2716     \Hy@Error{%
2717       Wrong driver option `luatex',\MessageBreak
2718       because luaTeX in PDF mode is not detected%
2719     }\@ehc
2720   \fi
2721 }
2722 \DeclareVoidOption{nativepdf}{%
2723   \HyOpt@CheckDvi{nativepdf}{%
2724     \def\Hy@driver{hdvips}%
2725     \PassOptionsToPackage{dvips}{color}%
2726   }%
2727 }
2728 \DeclareVoidOption{dvipdfm}{%
2729   \HyOpt@CheckDvi{dvipdfm}{%
2730     \def\Hy@driver{hdvipdfm}%
2731   }%
2732 }
2733 \DeclareVoidOption{dvipdfmx}{%
2734   \HyOpt@CheckDvi{dvipdfmx}{%
2735     \def\Hy@driver{hdvipdfm}%

```



```

2736 \PassOptionsToPackage{dvipdfmx}{color}%
2737 }%
2738 }
2739 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2740 \expandafter\ifx\csname if#1\expandafter\endcsname
2741 \csname iftrue\endcsname
2742 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2743 \else
2744 \chardef\SpecialDvipdfmxOutlineOpen\z@
2745 \fi
2746 }
2747 \DeclareVoidOption{xetex}{%
2748 \ifxetex
2749 \def\Hy@driver{hxtex}%
2750 \else
2751 \Hy@Error{%
2752 Wrong driver option `xetex',\MessageBreak
2753 because XeTeX is not detected%
2754 }\@ehc
2755 \fi
2756 }
2757 \DeclareVoidOption{pdfmark}{%
2758 \HyOpt@CheckDvi{pdfmark}{%
2759 \def\Hy@driver{hdvips}%
2760 }%
2761 }
2762 \DeclareVoidOption{dvips}{%
2763 \HyOpt@CheckDvi{dvips}{%
2764 \def\Hy@driver{hdvips}%
2765 \PassOptionsToPackage{dvips}{color}%
2766 }%
2767 }
2768 \DeclareVoidOption{hypertex}{%
2769 \HyOpt@CheckDvi{hypertex}{%
2770 \def\Hy@driver{hypertex}%
2771 }%
2772 }
2773 \let\Hy@MaybeStopNow\relax
2774 \DeclareVoidOption{vtex}{%
2775 \ifvtex
2776 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2777 \def\Hy@driver{hvtex}%
2778 \else
2779 \ifnum\OpMode=10\relax
2780 \def\Hy@driver{hvtexhtm}%
2781 \def\MaybeStopEarly{%
2782 \Hy@Message{Stopped early}%
2783 \Hy@AtBeginDocument{%
2784 \PDF@FinishDoc
2785 \gdef\PDF@FinishDoc{}%
2786 }%
2787 \endinput
2788 }%
2789 \else

```

```

2790 \Hy@Error{%
2791     Wrong driver option `vtex',\MessageBreak
2792     because of wrong OpMode (\the\OpMode)%
2793 } \@ehc
2794 \fi
2795 \fi
2796 \else
2797 \Hy@Error{%
2798     Wrong driver option `vtex',\MessageBreak
2799     because VTeX is not running%
2800 } \@ehc
2801 \fi
2802 }
2803 \DeclareVoidOption{vtxpdfmark}{%
2804 \ifvtex
2805 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2806 \def\Hy@driver{hvtexmrk}%
2807 \else
2808 \Hy@Error{%
2809     Wrong driver option `vtxpdfmark',\MessageBreak
2810     because of wrong OpMode (\the\OpMode)%
2811 } \@ehc
2812 \fi
2813 \else
2814 \Hy@Error{%
2815     Wrong driver option `vtxpdfmark,\MessageBreak
2816     because VTeX is not running%
2817 } \@ehc
2818 \fi
2819 }
2820 \DeclareVoidOption{dviwindo}{%
2821 \HyOpt@CheckDvi{dviwindo}{%
2822 \def\Hy@driver{hdviwind}%
2823 \kvsetkeys{Hyp}{colorlinks}%
2824 \PassOptionsToPackage{dviwindo}{color}%
2825 }%
2826 }
2827 \DeclareVoidOption{dvipsone}{%
2828 \HyOpt@CheckDvi{dvipsone}{%
2829 \def\Hy@driver{hdvipson}%
2830 \PassOptionsToPackage{dvipsone}{color}%
2831 }%
2832 }
2833 \DeclareVoidOption{textures}{%
2834 \HyOpt@CheckDvi{textures}{%
2835 \def\Hy@driver{htexture}%
2836 }%
2837 }
2838 \DeclareVoidOption{latex2html}{%
2839 \Hy@Warning{Option `latex2html` is obsolete. \MessageBreak
2840 A current html.sty will do all necessary (re)definitions%
2841 }%
2842 }
2843 \DeclareVoidOption{hitex}{%

```

```

2844 \ifhint
2845 \IfFileExists{hhitex.def}
2846   {\def\Hy@driver{hhitex}}}%
2847   {\Hy@Warning{%
2848     Missing driver file `hhitex.def',\MessageBreak
2849     ignoring hitex driver%
2850   }}%
2851 \else
2852   \Hy@Error{%
2853     Wrong driver option `hitex',\MessageBreak
2854     because HiTeX is not detected%
2855   }\@ehc
2856 \fi
2857 }

```

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

```

2858 \DeclareVoidOption{ps2pdf}{%
2859   \HyOpt@CheckDvi{ps2pdf}{%
2860     \def\Hy@driver{hdvips}%
2861     \PassOptionsToPackage{dvips}{color}%
2862   }}%
2863 }
2864 \let\HyOpt@DriverFallback\ltx@empty
2865 \define@key{Hyp}{driverfallback}{%
2866   \ifHy@DviMode
2867     \def\HyOpt@DriverFallback{#1}%
2868     \Hy@Match\HyOpt@DriverFallback{}{%
2869       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
2870       latex2html|tex4ht)$}%
2871   }{}{%
2872     \Hy@Warning{%
2873       Invalid driver `#1' for option\MessageBreak
2874       `driverfallback'%
2875     }%
2876     \let\HyOpt@DriverFallback\ltx@empty
2877   }%
2878 \fi
2879 }
2880 \let\HyOpt@CustomDriver\ltx@empty
2881 \define@key{Hyp}{customdriver}{%
2882   \IfFileExists{#1.def}{%
2883     \def\HyOpt@CustomDriver{#1}%
2884   }{%
2885     \Hy@Warning{%
2886       Missing driver file `#1.def',\MessageBreak
2887       ignoring custom driver%
2888     }%
2889   }%
2890 }

```

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.

```

2891 \define@key{Hyp}{hyperfigures}[true]{%
2892   \Hy@boolkey{hyperfigures}{#1}%
2893 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2894 \define@key{Hyp}{hyperfootnotes}[true]{%
2895   \Hy@boolkey{hyperfootnotes}{#1}%
2896 }

```

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

```

2897 \def\back@none{none}
2898 \def\back@section{section}
2899 \def\back@page{page}
2900 \def\back@slide{slide}
2901 \define@key{Hyp}{backref}[section]{%
2902   \lowercase{\def\Hy@tempa{#1}}%
2903   \ifx\Hy@tempa\@empty
2904     \let\Hy@tempa\back@section
2905   \fi
2906   \ifx\Hy@tempa\Hy@false
2907     \let\Hy@tempa\back@none
2908   \fi
2909   \ifx\Hy@tempa\back@slide
2910     \let\Hy@tempa\back@section
2911   \fi
2912   \ifx\Hy@tempa\back@page
2913     \PassOptionsToPackage{hyperpageref}{backref}%
2914     \Hy@backreftrue
2915   \else
2916     \ifx\Hy@tempa\back@section
2917       \PassOptionsToPackage{hyperref}{backref}%
2918       \Hy@backreftrue
2919     \else
2920       \ifx\Hy@tempa\back@none
2921         \Hy@backreffalse
2922       \else
2923         \Hy@WarnOptionValue{#1}{backref}{%
2924           `section', `slide', `page', `none',\MessageBreak
2925           or `false'}%
2926       \fi
2927     \fi
2928   \fi
2929 }
2930 \define@key{Hyp}{pagebackref}[true]{%
2931   \edef\Hy@tempa{#1}%
2932   \lowercase\expandafter{%
2933     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2934   }%
2935   \ifx\Hy@tempa\@empty
2936     \let\Hy@tempa\Hy@true
2937   \fi
2938   \ifx\Hy@tempa\Hy@true
2939     \PassOptionsToPackage{hyperpageref}{backref}%
2940     \Hy@backreftrue
2941   \else

```

```

2942 \ifx\Hy@tempa\Hy@false
2943 \Hy@backreffalse
2944 \else
2945 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
2946 \fi
2947 \fi
2948 }

```

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

```

2949 \define@key{Hyp}{hyperindex}[true]{%
2950 \Hy@boolkey{hyperindex}{#1}%
2951 }

```

Configuration of encap char.

```

2952 \define@key{Hyp}{encap}[|]{%
2953 \def\HyInd@EncapChar{#1}%
2954 }

```

12 Language options

The `\autoref` feature depends on the language.

```

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

```

```

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

```

```

3041 \def\FancyVerbLineautorefname{linea}%
3042 \def\theoremautorefname{Teorema}%
3043 \def\pageautorefname{Pag.\@}%
3044 }
3045 \def\HyLang@magyar{%
3046 \def\equationautorefname{Egyenlet}%
3047 \def\footnoteautorefname{l\'abjegyzet}%
3048 \def\itemautorefname{Elem}%
3049 \def\figureautorefname{\`A bra}%
3050 \def\tableautorefname{T\'abl\'azat}%
3051 \def\partautorefname{R\'esz}%
3052 \def\appendixautorefname{F\'uggel\'ek}%
3053 \def\chapterautorefname{fejezet}%
3054 \def\sectionautorefname{szakasz}%
3055 \def\subsectionautorefname{alszakasz}%
3056 \def\subsubsectionautorefname{alalszakasz}%
3057 \def\paragraphautorefname{bekezd\'es}%
3058 \def\subparagraphautorefname{albekezd\'es}%
3059 \def\FancyVerbLineautorefname{sor}%
3060 \def\theoremautorefname{T\'etel}%
3061 \def\pageautorefname{oldal}%
3062 }
3063 \def\HyLang@portuges{%
3064 \def\equationautorefname{Equa\c c\~ao}%
3065 \def\footnoteautorefname{Nota de rodap\'e}%
3066 \def\itemautorefname{Item}%
3067 \def\figureautorefname{Figura}%
3068 \def\tableautorefname{Tabela}%
3069 \def\partautorefname{Parte}%
3070 \def\appendixautorefname{Ap\~endice}%
3071 \def\chapterautorefname{Cap\'itulo}%
3072 \def\sectionautorefname{Se\c c\~ao}%
3073 \def\subsectionautorefname{Subse\c c\~ao}%
3074 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3075 \def\paragraphautorefname{par\'agrafo}%
3076 \def\subparagraphautorefname{subpar\'agrafo}%
3077 \def\FancyVerbLineautorefname{linha}%
3078 \def\theoremautorefname{Teorema}%
3079 \def\pageautorefname{P\'agina}%
3080 }

```

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`.

```

3081 \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`?

```

3082 \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.

```
3083 % \def\equationautorefname{%
3084 %   \cyr\cyrv\cyrry\cyrr\cyra\cyrrh\cyre\cyrn\cyri\cyre
3085 % }%
```

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

```
3086 \def\footnoteautorefname{%
3087   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3088 }%
```

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}”

```
3089 % \def\footnoteautorefname{%
3090 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrrh\cyrn\cyro\cyre\ %
3091 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrrh\cyra\cyrn\cyri\cyre
3092 % }%
```

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

```
3093 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3094 % \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.

```
3095 \def\itemautorefname{\cyr\cyrp.}%
3096 % \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.

```
3097 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3098 \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.

```
3099 \def\partautorefname{\cyr\cyrrh.}%
3100 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3101 \def\sectionautorefname{\cyr\cyrr\cyra\cyrrh\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.

```
3102 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3103 % \def\appendixautorefname{%
3104 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrh\cyre\cyrn\cyri\cyre
3105 % }%
```

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.


```

3106 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3107 \def\subsubsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%

```

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

```

3108 \def\paragraphautorefname{\cyr\cyrp.}%
3109 \def\subparagraphautorefname{\cyr\cyrp.}%

```

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

```

3110 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3111 % \def\subparagraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%

```

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

```

3112 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```

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

```

3113 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3114 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

```

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

```

3115 % \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 ...

```

3116 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%

```

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

```

3117 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3118 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%

```

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

```

3119 \def\pageautorefname{\cyr\cyrs.}%
3120 }

```

```

3121 \def\HyLang@spanish{%
3122 \def\equationautorefname{Ecuaci'on}%
3123 \def\footnoteautorefname{Nota a pie de p'agina}%
3124 \def\itemautorefname{Elemento}%
3125 \def\figureautorefname{Figura}%
3126 \def\tableautorefname{Tabla}%
3127 \def\partautorefname{Parte}%
3128 \def\appendixautorefname{Ap'endice}%
3129 \def\chapterautorefname{Cap'itulo}%
3130 \def\sectionautorefname{Secci'on}%
3131 \def\subsectionautorefname{Subsecci'on}%
3132 \def\subsubsectionautorefname{Subsubsecci'on}%
3133 \def\paragraphautorefname{P'arrafo}%
3134 \def\subparagraphautorefname{Subp'arrafo}%

```

```

3135 \def\FancyVerbLineautorefname{L\`inea}%
3136 \def\theoremautorefname{Teorema}%
3137 \def\pageautorefname{P\`agina}%
3138 }

3139 \def\HyLang@catalan{%
3140 \def\equationautorefname{Equaci\`o}%
3141 \def\footnoteautorefname{Nota al peu de p\`agina}%
3142 \def\itemautorefname{Element}%
3143 \def\figureautorefname{Figura}%
3144 \def\tableautorefname{Taula}%
3145 \def\partautorefname{Part}%
3146 \def\appendixautorefname{Ap\`endix}%
3147 \def\chapterautorefname{Cap\`itol}%
3148 \def\sectionautorefname{Secci\`o}%
3149 \def\subsectionautorefname{Subsecci\`o}%
3150 \def\subsubsectionautorefname{Subsubsecci\`o}%
3151 \def\paragraphautorefname{Par\`agraf}%
3152 \def\subparagraphautorefname{Subpar\`agraf}%
3153 \def\FancyVerbLineautorefname{L\`inia}%
3154 \def\theoremautorefname{Teorema}%
3155 \def\pageautorefname{P\`agina}%
3156 }

3157 \def\HyLang@vietnamese{%
3158 \def\equationautorefname{Ph\`uhorn\`}\ohorn\`ng tr\`inh}%
3159 \def\footnoteautorefname{Ch\`u th\`ich}%
3160 \def\itemautorefname{m\`d\`u\`c}%
3161 \def\figureautorefname{H\`inh}%
3162 \def\tableautorefname{B\`h\`a\`ng}%
3163 \def\partautorefname{Ph\`h\`acircumflex\`n}%
3164 \def\appendixautorefname{Ph\`d\`u\`l\`d\`u\`c}%
3165 \def\chapterautorefname{ch\`uhorn\`}\ohorn\`ng}%
3166 \def\sectionautorefname{m\`d\`u\`c}%
3167 \def\subsectionautorefname{m\`d\`u\`c}%
3168 \def\subsubsectionautorefname{m\`d\`u\`c}%
3169 \def\paragraphautorefname{d\`j\`o\`d\`a\`n}%
3170 \def\subparagraphautorefname{d\`j\`o\`d\`a\`n}%
3171 \def\FancyVerbLineautorefname{d\`ong}%
3172 \def\theoremautorefname{D\`J\`d\`i\`nh l\`y}%
3173 \def\pageautorefname{Trang}%
3174 }

```

Greek, see github issue 52

```

3175 \def\HyLang@greek{%
3176 \def\equationautorefname{\textEpsilon\textxi\acctonos\textiota\textsigma\text-
3177 \textomega\textsigma\texteta}%
3177 \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\text-
3178 \texteta\textmu\textepsilon\acctonos\textiota\textomega\textsigma\texteta}%
3178 \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textep-
3179 \textilon\acctonos\textiota\textmu\textepsilon\textnu\textomicron}%
3179 \def\figureautorefname{\textSigma\textchi\acctonos\texteta\textmu\textal-
3180 \textpha}%
3180 \def\tableautorefname{\textPi\acctonos\textiota\textnu\textalpha\textkappa\text-
3181 \textalpha}%

```

```

3181 \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvar-
sigma}%
3182 \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\text-
rho\texttau\texteta\textmu\textalpha}%
3183 \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textal-
pha\textlambda\textalpha\textiota\textomicron}%
3184 \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\text-
eta\texttau\textalpha}%
3185 \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\ac-
conos\textomicron\texttau\texteta\texttau\textalpha}%
3186 \def\subsubsectionautorefname{\textupsilon\textpi\textomicron\textupsilon\textpi\textomicron\text-
rho\textalpha\textphi\textomicron\textvarsigma}%
3187 \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\text-
rho\textalpha\textphi\textomicron\textvarsigma}%
3188 \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\text-
alpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomi-
cron\textvarsigma}%
3189 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\ac-
conos\texteta}%
3190 \def\theoremautorefname{\textTheta\textepsilon\acconos\textomega\text-
rho\texteta\textmu\textalpha}%
3191 \def\pageautorefname{\textsigma\textepsilon\textlambda\acconos\textiota\textdelta\text-
alpha}%
3192 }

3193 \def\HyLang@dutch{%
3194 \def\equationautorefname{Vergelijking}%
3195 \def\footnoteautorefname{voetnoot}%
3196 \def\itemautorefname{punt}%
3197 \def\figureautorefname{Figuur}%
3198 \def\tableautorefname{Tabel}%
3199 \def\partautorefname{Deel}%
3200 \def\appendixautorefname{Bijlage}%
3201 \def\chapterautorefname{hoofdstuk}%
3202 \def\sectionautorefname{paragraaf}%
3203 \def\subsectionautorefname{deelparagraaf}%
3204 \def\subsubsectionautorefname{deel-deelparagraaf}%
3205 \def\paragraphautorefname{alinea}%
3206 \def\subparagraphautorefname{deelalinea}%
3207 \def\FancyVerbLineautorefname{regel}%
3208 \def\theoremautorefname{Stelling}%
3209 \def\pageautorefname{pagina}%
3210 }

3211 \def\HyLang@norsk{%
3212 \def\equationautorefname{Ligning}%
3213 \def\footnoteautorefname{fotnote}%
3214 \def\itemautorefname{element}%
3215 \def\figureautorefname{Figur}%
3216 \def\tableautorefname{Tabell}%
3217 \def\partautorefname{Del}%
3218 \def\appendixautorefname{Tillegg}%
3219 \def\chapterautorefname{kapittel}%
3220 \def\sectionautorefname{seksjon}%
3221 \def\subsectionautorefname{underseksjon}%
3222 \def\subsubsectionautorefname{under-underseksjon}%
3223 \def\paragraphautorefname{avsnitt}%

```

```

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

```

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

```

3265 \def\HyLang@addto#1#2{%
3266   #2%
3267   \@temptokena{#2}%
3268   \ifx#1\relax
3269     \let#1\@empty
3270   \fi
3271   \ifx#1\@undefined
3272     \edef#1{\the\@temptokena}%
3273   \else
3274     \toks@\expandafter{#1}%

```

```

3275 \edef#1{\the\toks@\the\@temptokena}%
3276 \fi
3277 \@temptokena{\}\toks@\@temptokena
3278 }

3279 \def\HyLang@DeclareLang#1#2#3{%
3280 \ifcsname extras#1\endcsname
3281 \expandafter\HyLang@addto
3282 \csname extras#1\expandafter\endcsname
3283 \csname HyLang@#2\endcsname
3284 \begingroup
3285 \edef\x{\endgroup
3286 #3%
3287 }%
3288 \x
3289 \@namedef{HyLang@#1@done}{}%
3290 \fi
3291 \begingroup
3292 \edef\x##1##2{%
3293 \noexpand\ifx##2\relax
3294 \errmessage{No definitions for language #2' found!}%
3295 \noexpand\fi
3296 \endgroup
3297 \noexpand\define@key{Hyp}{#1}[]{%
3298 \noexpand\@ifundefined{HyLang@#1@done}{%
3299 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3300 #3%
3301 \noexpand\@namedef{HyLang@#1@done}{}%
3302 }{}%
3303 }%
3304 }%
3305 \expandafter\x\csname extras#1\expandafter\endcsname
3306 \csname HyLang@#2\endcsname
3307 }

3308 \HyLang@DeclareLang{english}{english}{}
3309 \HyLang@DeclareLang{UKenglish}{english}{}
3310 \HyLang@DeclareLang{british}{english}{}
3311 \HyLang@DeclareLang{USenglish}{english}{}
3312 \HyLang@DeclareLang{american}{english}{}
3313 \HyLang@DeclareLang{german}{german}{}
3314 \HyLang@DeclareLang{austrian}{german}{}
3315 \HyLang@DeclareLang{ngerman}{german}{}
3316 \HyLang@DeclareLang{naustrian}{german}{}
3317 \HyLang@DeclareLang{nswissgerman}{german}{}
3318 \HyLang@DeclareLang{swissgerman}{german}{}
3319 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3320 \HyLang@DeclareLang{brazil}{portuges}{}
3321 \HyLang@DeclareLang{brazilian}{portuges}{}
3322 \HyLang@DeclareLang{portuguese}{portuges}{}
3323 \HyLang@DeclareLang{spanish}{spanish}{}
3324 \HyLang@DeclareLang{catalan}{catalan}{}
3325 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3326 \HyLang@DeclareLang{french}{french}{}
3327 \HyLang@DeclareLang{frenchb}{french}{}
3328 \HyLang@DeclareLang{francais}{french}{}

```

```

3329 \HyLang@DeclareLang{acadian}{french}{}
3330 \HyLang@DeclareLang{canadien}{french}{}
3331 \HyLang@DeclareLang{italian}{italian}{}
3332 \HyLang@DeclareLang{magyar}{magyar}{}
3333 \HyLang@DeclareLang{hungarian}{magyar}{}
3334 \HyLang@DeclareLang{greek}{greek}{}
3335 \HyLang@DeclareLang{dutch}{dutch}{}
3336 \HyLang@DeclareLang{norsk}{norsk}{}
3337 \HyLang@DeclareLang{norwegian}{norsk}{}
3338 \HyLang@DeclareLang{danish}{danish}{}
3339 \HyLang@DeclareLang{swedish}{swedish}{}

```

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

```

3340 \DeclareVoidOption{vietnamese}{%
3341   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3342   \Hy@AtEndOfPackage{%
3343     \@ifundefined{T@PU}{}{}%
3344     \input{puvnenc.def}%
3345   }%
3346 }%
3347 }
3348 \DeclareVoidOption{vietnam}{%
3349   \HyLang@addto\extravietnam\HyLang@vietnamese
3350   \Hy@AtEndOfPackage{%
3351     \@ifundefined{T@PU}{}{}%
3352     \input{puvnenc.def}%
3353   }%
3354 }%
3355 }

```

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

```

3356 \DeclareVoidOption{arabic}{%
3357   \Hy@AtEndOfPackage{%
3358     \@ifundefined{T@PU}{}{}%
3359     \input{puarenc.def}%
3360   }%
3361 }%
3362 }

```

13 Options to change appearance of links

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

```

3363 \define@key{Hyp}{colorlinks}[true]{%
3364   \Hy@boolkey{colorlinks}{#1}%
3365 }
3366 \DeclareVoidOption{hidelinks}{%
3367   \Hy@colorlinksfalse
3368   \Hy@ocgcolorlinksfalse
3369   \Hy@frenchlinksfalse
3370   \def\Hy@colorlink##1{\begingroup}%
3371   \def\Hy@endcolorlink{\endgroup}%
3372   \def\@pdfborder{0 0 0}%
3373   \let\@pdfborderstyle\ltx@empty

```

```

3374 }
3375 \define@key{Hyp}{ocgcolorlinks}[true]{%
3376   \Hy@boolkey{ocgcolorlinks}{#1}%
3377 }
3378 \Hy@AtBeginDocument{%
3379   \begingroup
3380     \@ifundefined{OBJ@OCG@view}{%
3381       \ifHy@ocgcolorlinks
3382         \Hy@Warning{%
3383           Driver does not support `ocgcolorlinks',\MessageBreak
3384           using `colorlinks' instead%
3385         }%
3386       \fi
3387     }{}%
3388   \endgroup
3389 }
3390 \define@key{Hyp}{frenchlinks}[true]{%
3391   \Hy@boolkey{frenchlinks}{#1}%
3392 }

```

14 Bookmarking

```

3393 \begingroup\expandafter\expandafter\expandafter\endgroup
3394 \expandafter\ifx\csname chapter\endcsname\relax
3395   \def\toclevel@part{0}%
3396 \else
3397   \def\toclevel@part{-1}%
3398 \fi
3399 \def\toclevel@chapter{0}
3400 \def\toclevel@section{1}
3401 \def\toclevel@subsection{2}
3402 \def\toclevel@subsubsection{3}
3403 \def\toclevel@paragraph{4}
3404 \def\toclevel@subparagraph{5}
3405 \def\toclevel@figure{0}
3406 \def\toclevel@table{0}

3407 \define@key{Hyp}{bookmarks}[true]{%
3408   \Hy@boolkey{bookmarks}{#1}%
3409 }

3410 \define@key{Hyp}{bookmarksopen}[true]{%
3411   \Hy@boolkey{bookmarksopen}{#1}%
3412 }

```

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.

```

3413 \let\Hy@bookmarksdepth\c@tocdepth
3414 \define@key{Hyp}{bookmarksdepth}[]{%
3415   \begingroup
3416     \edef\x{#1}%
3417     \ifx\x\empty
3418       \global\let\Hy@bookmarksdepth\c@tocdepth
3419     \else
3420       \@ifundefined{toclevel@\x}{%
3421         \@onelevel@sanitize\x
3422         \edef\y{\expandafter\@car\x\@nil}%
3423         \ifcase 0\expandafter\ifx\y-1\fi
3424           \expandafter\ifnum\expandafter`\y>47 %
3425           \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3426         \Hy@Warning{Unknown document division name (\x)}%
3427       \else
3428         \setbox\z@=\hbox{%
3429           \count@=\x
3430           \xdef\Hy@bookmarksdepth{\the\count@}%
3431         }%
3432       \fi
3433     }{%
3434       \setbox\z@=\hbox{%
3435         \count@=\csname toclevel@\x\endcsname
3436         \xdef\Hy@bookmarksdepth{\the\count@}%
3437       }%
3438     }%
3439   \fi
3440 \endgroup
3441 }

```

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

```

3442 \define@key{Hyp}{bookmarksopenlevel}{%
3443   \def\@bookmarksopenlevel{#1}%
3444 }
3445 \def\@bookmarksopenlevel{\maxdimen}
3446 % `bookmarkstype' to specify which `toc' file to mimic
3447 \define@key{Hyp}{bookmarkstype}{%
3448   \def\Hy@bookmarkstype{#1}%
3449 }
3450 \def\Hy@bookmarkstype{toc}

```

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

```

3451 \define@key{Hyp}{bookmarksnumbered}[true]{%
3452   \Hy@boolkey{bookmarksnumbered}{#1}%
3453 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3454 \define@key{Hyp}{CJKbookmarks}[true]{%
3455   \Hy@boolkey{CJKbookmarks}{#1}%
3456 }

3457 \def\Hy@temp#1{%
3458   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3459 }
3460 \def\Hy@@temp#1#2#3{%

```



```

3461 \define@key{Hyp}{#2color}{%
3462   \HyColor@HyperrefColor{##1}#1%
3463 }%
3464 \def#1{#3}%
3465 }
3466 \Hy@temp{link}{red}
3467 \Hy@temp{anchor}{black}
3468 \Hy@temp{cite}{green}
3469 \Hy@temp{file}{cyan}
3470 \Hy@temp{url}{magenta}
3471 \Hy@temp{menu}{red}
3472 \Hy@temp{run}{\@filecolor}
3473 \define@key{Hyp}{pagecolor}{%
3474   \Hy@WarningPageColor
3475 }
3476 \def\Hy@WarningPageColor{%
3477   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3478   \global\let\Hy@WarningPageColor\relax
3479 }
3480 \define@key{Hyp}{allcolors}{%
3481   \HyColor@HyperrefColor{#1}\@linkcolor
3482   \HyColor@HyperrefColor{#1}\@anchorcolor
3483   \HyColor@HyperrefColor{#1}\@citecolor
3484   \HyColor@HyperrefColor{#1}\@filecolor
3485   \HyColor@HyperrefColor{#1}\@urlcolor
3486   \HyColor@HyperrefColor{#1}\@menucolor
3487   \HyColor@HyperrefColor{#1}\@runcolor
3488 }
3489 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3490 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3491 \let\@baseurl\@empty
3492 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3493 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3494 \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.

```

3495 \let\@pdfpagetransition\relax
3496 \define@key{Hyp}{pdfpagetransition}{%
3497   \def\@pdfpagetransition{#1}%
3498 }

```

`\@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.

```

3499 \let\@pdfpageduration\relax
3500 \define@key{Hyp}{pdfpageduration}{%
3501   \def\@pdfpageduration{#1}%
3502   \Hy@Match\@pdfpageduration{}{%

```

```

3503   ^{([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)}$%
3504 }{}{%
3505   \Hy@Warning{%
3506     Invalid value `\'@pdfpageduration'\MessageBreak
3507     of option `pdfpageduration'\MessageBreak
3508     is replaced by an empty value%
3509   }%
3510   \let\@pdfpageduration\ltx@empty
3511 }%
3512 }

```

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).

```

3513 \def\Hy@ColorList{cite,file,link,menu,run,url}
3514 \@for\Hy@temp:=\Hy@ColorList\do{%
3515   \edef\Hy@temp{%
3516     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3517       \noexpand\HyColor@HyperrefBorderColor
3518       {##1}}%
3519     \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3520     {hyperref}%
3521     {\Hy@temp bordercolor}%
3522   }%
3523 }%
3524 \Hy@temp
3525 }
3526 \define@key{Hyp}{pagebordercolor}{%
3527   \Hy@WarningPageBorderColor
3528 }
3529 \def\Hy@WarningPageBorderColor{%
3530   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3531   \global\let\Hy@WarningPageBorderColor\relax
3532 }
3533 \define@key{Hyp}{allbordercolors}{%
3534   \def\Hy@temp##1##2{%
3535     \HyColor@HyperrefBorderColor{##1}{##1}{hyperref}{##2bordercolor}%
3536   }%
3537   \Hy@temp\@citebordercolor{cite}%
3538   \Hy@temp\@filebordercolor{file}%
3539   \Hy@temp\@linkbordercolor{link}%
3540   \Hy@temp\@menubordercolor{menu}%
3541   \Hy@temp\@runbordercolor{run}%
3542   \Hy@temp\@urlbordercolor{url}%
3543 }
3544 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{##1}}
3545 \Hy@DefNameKey{pdfhighlight}{%
3546   \do{/I}{Invert}%

```

```

3547 \do{/N}{None}%
3548 \do{/O}{Outline}%
3549 \do{/P}{Push}%
3550 }
3551 \def\Hy@setpdfhighlight{%
3552 \ifx\@pdfhighlight\@empty
3553 \else
3554 /H\@pdfhighlight
3555 \fi
3556 }
3557 \define@key{Hyp}{pdfborder}{%
3558 \let\Hy@temp\@pdfborder
3559 \def\@pdfborder{#1}%
3560 \Hy@Match\@pdfborder{}{%
3561 ^\HyPat@NonNegativeReal/ %
3562 \HyPat@NonNegativeReal/ %
3563 \HyPat@NonNegativeReal/%
3564 ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?}%
3565 }{}{%
3566 \Hy@Warning{%
3567 Invalid value ` \@pdfborder'\MessageBreak
3568 for option `pdfborder'.\MessageBreak
3569 Option setting is ignored%
3570 }%
3571 \let\@pdfborder\Hy@temp
3572 }%
3573 }
3574 \define@key{Hyp}{pdfborderstyle}{%
3575 \let\Hy@temp\@pdfborderstyle
3576 \def\@pdfborderstyle{#1}%
3577 \Hy@Match\@pdfborderstyle{}{%
3578 ^%
3579 ( */Type */Border%
3580 | */W +\HyPat@NonNegativeReal/%
3581 | */S */[SDBIU]%
3582 | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?}%
3583 )* *$%
3584 }{}{%
3585 \Hy@Warning{%
3586 Invalid value ` \@pdfborderstyle'\MessageBreak
3587 for option `pdfborderstyle'.\MessageBreak
3588 Option setting is ignored%
3589 }%
3590 \let\@pdfborderstyle\Hy@temp
3591 }%
3592 }
3593 \def\Hy@setpdfborder{%
3594 \ifx\@pdfborder\@empty
3595 \else
3596 /Border[\@pdfborder]%
3597 \fi
3598 \ifx\@pdfborderstyle\@empty
3599 \else
3600 /BS<<\@pdfborderstyle>>%

```

```

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

```

```

3655 \Hy@DefNameKey{pdfduplex}{%
3656   \do{Simplex}{}%
3657   \do{DuplexFlipShortEdge}{}%
3658   \do{DuplexFlipLongEdge}{}%
3659 }
3660 \Hy@DefNameKey{pdfpicktraybypdsize}{%
3661   \do{true}{}%
3662   \do{false}{}%
3663 }
3664 \define@key{Hyp}{pdfprintpagerange}{%
3665   \def\@pdfprintpagerange{#1}%
3666 }
3667 \Hy@DefNameKey{pdfnumcopies}{%
3668   \do{2}{two copies}%
3669   \do{3}{three copies}%
3670   \do{4}{four copies}%
3671   \do{5}{five copies}%
3672 }
3673 \define@key{Hyp}{pdfusetitle}[true]{%
3674   \Hy@boolkey{pdfusetitle}{#1}%
3675 }
3676 \def\HyXeTeX@CheckUnicode{%
3677   \ifxetex
3678     \ifHy@unicode
3679     \else
3680       \Hy@WarningNoLine{%
3681         XeTeX driver only supports unicode.\MessageBreak
3682         Enabling option `unicode'%
3683       }%
3684       \kvsetkeys{Hyp}{unicode}%
3685     \fi
3686   \else
3687     \let\HyXeTeX@CheckUnicode\relax
3688   \fi
3689 }
3690 \def\HyPsd@PrerenderUnicode#1{%
3691   \begingroup
3692     \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3693     \else
3694       \sbox0{%
3695         \let\GenericInfo\@gobbletwo
3696         \let\GenericWarning\@gobbletwo
3697         \let\GenericError\@gobblefour
3698         \PrerenderUnicode{#1}%
3699       }%
3700     \fi
3701   \endgroup
3702 }
3703 \define@key{Hyp}{pdftitle}{%
3704   \AddToDocumentProperties[hyperref]{pdftitle}{#1}%
3705   \HyXeTeX@CheckUnicode
3706   \HyPsd@PrerenderUnicode{#1}%
3707   \pdfstringdef\@pdftitle{#1}%
3708 }

```

```

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

```

```

3763 \else
3764 \ifx\Hy@temp\HyInfo@trapped@unknown
3765 \def\@pdftrapped{Unknown}%
3766 \else
3767 \ifx\Hy@temp\@empty
3768 \else
3769 \Hy@Warning{%
3770     Unsupported value `#1'\MessageBreak
3771     for option `pdftrapped'%
3772 }%
3773 \fi
3774 \def\@pdftrapped{}%
3775 \fi
3776 \fi
3777 \fi
3778 }
3779 \def\HyInfo@trapped@true{true}
3780 \def\HyInfo@trapped@false{false}
3781 \def\HyInfo@trapped@unknown{unknown}
3782 \def\HyInfo@TrappedUnsupported{%
3783 \ifx\@pdftrapped\@empty
3784 \else
3785 \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
3786 \gdef\HyInfo@TrappedUnsupported{}}%
3787 \fi
3788 }
3789 \define@key{Hyp}{pdfinfo}{%
3790 \kvsetkeys{pdfinfo}{#1}%
3791 }
3792 \def\Hy@temp#1{%
3793 \lowercase{\Hy@temp@A{#1}}{#1}%
3794 }
3795 \def\Hy@temp@A#1#2{%
3796 \define@key{pdfinfo}{#2}{%
3797 \hypersetup{pdf#1={#1}}}%
3798 }%
3799 }
3800 \Hy@temp{Title}
3801 \Hy@temp{Author}
3802 \Hy@temp{Keywords}
3803 \Hy@temp{Subject}
3804 \Hy@temp{Creator}
3805 \Hy@temp{Producer}
3806 \Hy@temp{CreationDate}
3807 \Hy@temp{ModDate}
3808 \Hy@temp{Trapped}
3809 \newif\ifHyInfo@AddonUnsupported
3810 \kv@set@family@handler{pdfinfo}{%
3811 \HyInfo@AddonHandler{#1}{#2}%
3812 }
3813 \let\HyInfo@do\relax
3814 \def\HyInfo@AddonHandler#1#2{%
3815 \ifx\kv@value\relax
3816 \Hy@Warning{%

```

```

3817 Option `pdfinfo': ignoring key `kv@key' without value%
3818 }%
3819 \else
3820 \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3821 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3822 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3823 \ifHyInfo@AddonUnsupported
3824 \Hy@Warning{%
3825 This driver does not support additional\MessageBreak
3826 information entries, therefore\MessageBreak
3827 `kv@key' is ignored%
3828 }%
3829 \else
3830 \def\HyInfo@tmp##1{%
3831 \kv@define@key{pdfinfo}{##1}{%
3832 \HyXeTeX@CheckUnicode
3833 \HyPsd@PrerenderUnicode{###1}%
3834 \pdfstringdef\HyInfo@Value{###1}%
3835 \global\expandafter
3836 \let\csname HyInfo@Value@##1\endcsname
3837 \HyInfo@Value
3838 }%
3839 }%
3840 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
3841 \global\expandafter
3842 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
3843 \csname KV@pdfinfo@\HyInfo@Key\endcsname
3844 \xdef\HyInfo@AddonList{%
3845 \HyInfo@AddonList
3846 \HyInfo@do{\HyInfo@Key}%
3847 }%
3848 \expandafter\kv@parse@normalized\expandafter{%
3849 \HyInfo@Key={#2}%
3850 }{%
3851 \kv@processor@default{pdfinfo}%
3852 }%
3853 \fi
3854 \else
3855 \expandafter\kv@parse@normalized\expandafter{%
3856 \HyInfo@Key={#2}%
3857 }{%
3858 \kv@processor@default{pdfinfo}%
3859 }%
3860 \fi
3861 \fi
3862 }
3863 \def\HyInfo@GenerateAddons{%
3864 \ifHyInfo@AddonUnsupported
3865 \def\HyInfo@Addons{}%
3866 \else
3867 \begingroup
3868 \toks@{}%
3869 \def\HyInfo@do##1{%
3870 \EdefEscapeName\HyInfo@Key{##1}%

```



```

3871 \edef\x{%
3872 \toks@{%
3873 \the\toks@
3874 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3875 }%
3876 }%
3877 \x
3878 }%
3879 \HyInfo@AddonList
3880 \edef\x{\endgroup
3881 \def\noexpand\HyInfo@Addons{\the\toks@}%
3882 }%
3883 \x
3884 \fi
3885 }
3886 \global\let\HyInfo@AddonList\ltx@empty

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

```

```

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

```

```

3979 \Hy@boolkey{pdfa}{#1}%
3980 }
3981 \define@key{Hyp}{pdfnewwindow}[true]{%
3982   \def\Hy@temp{#1}%
3983   \ifx\Hy@temp\@empty
3984     \Hy@pdfnewwindowsetfalse
3985   \else
3986     \Hy@pdfnewwindowsettrue
3987     \Hy@boolkey{pdfnewwindow}{#1}%
3988   \fi
3989 }
3990 \def\Hy@SetNewWindow{%
3991   \ifHy@pdfnewwindowset
3992     /NewWindow %
3993   \ifHy@pdfnewwindow true\else false\fi
3994 \fi
3995 }
3996 \Hy@DefNameKey{pdfpagelayout}{%
3997   \do{SinglePage}{}%
3998   \do{OneColumn}{}%
3999   \do{TwoColumnLeft}{}%
4000   \do{TwoColumnRight}{}%
4001   \do{TwoPageLeft}{PDF 1.5}%
4002   \do{TwoPageRight}{PDF 1.5}%
4003 }
4004 \define@key{Hyp}{pdflang}{%
4005   \edef\@pdflang{#1}%
4006   \def\Hy@temp{\relax}%
4007   \ifx\@pdflang\Hy@temp
4008     \let\@pdflang\relax
4009   \fi
4010   \ifx\@pdflang\relax
4011     \else
4012     \ifx\@pdflang\ltx@empty
4013     \else

```

Test according to ABNF of RFC 3066.

```

4014 \Hy@Match\@pdflang{icase}{%
4015   ~%
4016   [a-z]{1,8}%
4017   (-[a-z0-9]{1,8})*%
4018   $%
4019 }{%

```

Test according to ABNF of RFC 5646.

```

4020 \Hy@Match\@pdflang{icase}{%
4021   ~%
4022   (%
4023     % langtag
4024     (% language
4025       [a-z]{2,3}%
4026       ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4027       |[a-z]{4}% reserved for future use
4028       |[a-z]{5,8}% registered language subtag
4029     )%

```

```

4030      (-[a-z]{4})?% script
4031      (-([a-z]{2}|[0-9]{3}))?% region
4032      (-([a-z]{5,8}|[0-9][a-z0-9]{3}))% variant
4033      (-[0-9a-wyz](-[a-z0-9]{2,8})+)% extension
4034      (-x(-[a-z0-9]{1,8})+)?% privateuse
4035      % privateuse
4036      |x(-[a-z0-9]{1,8})+)%
4037      % grandfathered/irregular
4038      |en-GB-oed%
4039      |i-(ami|bnn|default|enochian|hak|klinton|lux|%
4040          mingo|navajo|pwn|tao|tay|tsu)%
4041      |sgn-(BE-FR|BE-NL|CH-DE)%
4042      % grandfathered/regular
4043      |art-lojban%
4044      |cel-gaulish%
4045      |no-(bok|nyn)%
4046      |zh-(guoyu|hakka|min|min-nan|xiang)%
4047      )%
4048      $%
4049      }{%

```

Test for unique extensions.

```

4050      \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4051      \Hy@Match\@pdflang{icase}{~x-}{}{%
4052      % remove privateuse
4053      \edef\Hy@temp{-\@pdflang}%
4054      \Hy@Match\Hy@temp{icase}{{%
4055      ~%
4056      (%
4057      (-[a-wyz0-9]|-[a-z0-9]{2,8})%
4058      )%
4059      -x-%
4060      }{%
4061      \edef\Hy@temp{%
4062      \expandafter\strip@prefix\pdfastmatch1%
4063      }%
4064      }{}%
4065      \Hy@Match\Hy@temp{icase}{{%
4066      (-[a-wyz0-9]-).*\ltx@backslashchar1%
4067      }{%
4068      \Hy@Warning{%
4069      Invalid language identifier `#1'\MessageBreak
4070      for option `pdflang', because it violates\MessageBreak
4071      well-formedness defined in RFC 4646\MessageBreak
4072      by duplicate singleton subtags%
4073      }%
4074      \let\@pdflang\relax
4075      }{}%
4076      }%
4077      }{}%

```

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

```

4078      \ifx\@pdflang\relax
4079      \else
4080      \Hy@Match\@pdflang{icase}{%

```

```

4081      ~%
4082      [a-zA-Z]{2}-%
4083      (%
4084          aa|AA|%
4085          [qQ][m-zA-Z]|%
4086          [xX][a-zA-Z]|%
4087          zz|ZZ%
4088      )%
4089      (-|$)%
4090      }{%
4091      \Hy@Warning{%
4092          Invalid language identifier `#1'\MessageBreak
4093          for option `pdflang' because of invalid country code%
4094          \MessageBreak
4095          in second subtag (RFC 3066)%
4096      }%
4097      \let\@pdflang\relax
4098      }{}%
4099      \fi
4100      }{%
4101      \Hy@Warning{%
4102          Invalid language identifier `#1'\MessageBreak
4103          for option `pdflang', because it violates\MessageBreak
4104          well-formedness defined in RFC 5646%
4105      }%
4106      \let\@pdflang\relax
4107      }%
4108      }{%
4109      \Hy@Warning{%
4110          Invalid language identifier `#1'\MessageBreak
4111          for option `pdflang' (RFC 3066)%
4112      }%
4113      \let\@pdflang\relax
4114      }%
4115      \fi
4116      \fi
4117      }
4118      \define@key{Hyp}{pdfpagelabels}[true]{%
4119          \Hy@boolkey{pdfpagelabels}{#1}%
4120      }
4121      \define@key{Hyp}{pdfescapeform}[true]{%
4122          \Hy@boolkey{pdfescapeform}{#1}%
4123      }

```

Default values:

```

4124 \def\@linkbordercolor{1 0 0}
4125 \def\@urlbordercolor{0 1 1}
4126 \def\@menubordercolor{1 0 0}
4127 \def\@filebordercolor{0 .5 .5}
4128 \def\@runbordercolor{0 .7 .7}
4129 \def\@citebordercolor{0 1 0}
4130 \def\@pdfhighlight{/I}
4131 \let\@pdftitle\tx@empty
4132 \let\@pdfauthor\tx@empty
4133 \let\@pdfproducer\relax

```

```

4134 \def\@pdfcreator{LaTeX with hyperref}
4135 \let\@pdfcreationdate\ltx@empty
4136 \let\@pdfmoddate\ltx@empty
4137 \let\@pdfsubject\ltx@empty
4138 \let\@pdfkeywords\ltx@empty
4139 \let\@pdftrapped\ltx@empty
4140 \let\@pdfpagescrop\ltx@empty
4141 \def\@pdfstartview{/Fit}
4142 \def\@pdfremotestartview{/Fit}
4143 \def\@pdfstartpage{1}
4144 \let\@pdfprintpagerange\ltx@empty
4145 \let\@pdflang\relax
4146 \let\PDF@SetupDoc\@empty
4147 \let\PDF@FinishDoc\@empty
4148 \let\phantomsection\@empty
4149 \let\special@paper\@empty
4150 \def\HyperDestNameFilter#1{#1}
4151 \Hy@AtBeginDocument{%
4152   \begingroup
4153     \edef\x{\ifdim\stockheight>z@ \stockheight\else\paperheight\fi}%
4154     \dimen@=\x\relax
4155     \ifdim\dimen@>z@
4156     \else
4157       \dimen@=11in\relax
4158       \Hy@WarningNoLine{%
4159         Height of page (\expandafter\string\x) %
4160         is invalid (\the\x),\MessageBreak
4161         using 11in%
4162       }%
4163       \fi
4164       \dimen@=0.99626401\dimen@
4165       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4166   \endgroup
4167 }
4168 \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.

```

4169 \let\hyper@normalise\ExecuteOptions
4170 \let\ExecuteOptions\hypersetup
4171 \Hy@RestoreCatcodes
4172 \InputIfFileExists{hyperref.cfg}{\|}{\|}
4173 \Hy@SetCatcodes
4174 \let\ExecuteOptions\hyper@normalise
4175 \ifx\Hy@MaybeStopNow\relax
4176 \else
4177   \Hy@stoppedearlytrue
4178   \expandafter\Hy@MaybeStopNow
4179 \fi
4180 \Hy@stoppedearlyfalse

```

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

```

4181 \SetupKeyvalOptions{family=Hyp}

```

```

4182 \DeclareLocalOptions{%
4183   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4184 }

    Add option tex4ht if package tex4ht is loaded.
4185 \@ifpackagewith{hyperref}{tex4ht}{%
4186 }{%
4187   \@ifpackageloaded{tex4ht}{%
4188     \PassOptionsToPackage{tex4ht}{hyperref}%
4189   }{%
4190     \ltx@ifundefined{HCode}{%
4191     }{%
4192       \begingroup
4193       \def\Hy@pkg{tex4ht}%
4194       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4195       \def\Hy@param{#2#3}%
4196       \ifx\Hy@param\ltx@empty
4197         \expandafter\ltx@gobble
4198       \else
4199         \def\Hy@param{#3}%
4200         \ifx\Hy@param\Hy@pkg
4201           \PassOptionsToPackage{#2}{tex4ht}%
4202           \expandafter\expandafter\expandafter\@gobble
4203         \else
4204           \expandafter\expandafter\expandafter\ltx@firstofone
4205         \fi
4206       \fi
4207       {\Hy@temp@A#4\Hy@NIL}%
4208     }%
4209     \expandafter
4210     \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4211   \endgroup
4212   \PassOptionsToPackage{tex4ht}{hyperref}%
4213 }%
4214 }%
4215 }

4216 \let\ReadBookmarks\relax
4217 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4218 \def\Hy@xspace@end{}
4219 \ltx@ifundefined{xspaceaddeceptions}{%
4220   \Hy@AtBeginDocument{%
4221     \ltx@ifundefined{xspaceaddeceptions}{%
4222     }{%
4223       \def\Hy@xspace@end{%
4224       \ltx@gobble{end for xspace}%
4225     }%
4226     \xspaceaddeceptions{%
4227       \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4228     }%

```

```

4229 }%
4230 }%
4231 }{%
4232 \def\Hy@xspace@end{%
4233 \ltx@gobble{end for xspace}%
4234 }%
4235 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4236 }

```

15.2 Option draft

```

4237 \Hy@AtBeginDocument{%
4238 \ifHy@draft
4239 \let\hyper@@anchor\@gobble
4240 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4241 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4242 \def\hyper@anchorend{\Hy@xspace@end}%
4243 \let\hyper@linkstart\@gobbletwo
4244 \def\hyper@linkend{\Hy@xspace@end}%
4245 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4246 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4247 \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4248 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4249 \let\PDF@SetupDoc\@empty
4250 \let\PDF@FinishDoc\@empty
4251 \let\ReadBookmarks\relax
4252 \let\WriteBookmarks\relax
4253 \Hy@WarningNoLine{Draft mode on}%
4254 \fi
4255 \Hy@DisableOption{draft}%
4256 \Hy@DisableOption{nolinks}%
4257 \Hy@DisableOption{final}%
4258 }

```

15.3 PDF/A

```

4259 \Hy@DisableOption{pdfa}
4260 \ifHy@pdfa
4261 \ifnum \Hy@pdf@majorminor@version < 104
4262 \kvsetkeys{Hyp}{pdfversion=1.4}%
4263 \fi
4264 \Hy@DisableOption{pdfversion}%
4265 \def\Hy@Acrobatmenu#1#2{%
4266 \leavevmode
4267 \begingroup
4268 \edef\x{#1}%
4269 \@onelevel@sanitize\x
4270 \ifx\x\Hy@NextPage
4271 \let\y=Y%
4272 \else
4273 \ifx\x\Hy@PrevPage
4274 \let\y=Y%
4275 \else
4276 \ifx\x\Hy@FirstPage
4277 \let\y=Y%

```



```

4278     \else
4279     \ifx\x\Hy@LastPage
4280     \let\y=Y%
4281     \else
4282     \let\y=N%
4283     \fi
4284     \fi
4285     \fi
4286     \fi
4287     \expandafter\endgroup
4288     \ifx\y Y%
4289     \else
4290     \Hy@Error{%
4291     PDF/A: Named action `#1' is not permitted%
4292     }\@ehc
4293     {#2}%
4294     \expandafter\@gobble
4295     \fi
4296     }%
4297     \def\Hy@temp#1{%
4298     \expandafter\def\csname Hy@#1\endcsname{#1}%
4299     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4300     }%
4301     \Hy@temp{NextPage}%
4302     \Hy@temp{PrevPage}%
4303     \Hy@temp{FirstPage}%
4304     \Hy@temp{LastPage}%
4305     \else
4306     \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4307     \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.

```

4308 \def\Hy@wrapper@babel#1#2{%
4309   \begingroup
4310   \Hy@safe@activetrue
4311   \set@display@protect
4312   \edef\x{#2}%
4313   \@onelevel@sanitize\x
4314   \toks@{#1}%
4315   \edef\x{\endgroup\the\toks@{\x}}%
4316   \x
4317 }
4318 \def\Hy@WrapperDef#1{%
4319   \begingroup
4320   \escapechar=\m@ne
4321   \xdef\Hy@gtemp{%
4322     \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4323   }%

```

```

4324 \endgroup
4325 \edef#1{%
4326   \noexpand\Hy@wrapper@babel
4327   \expandafter\noexpand\Hy@gtemp
4328 }%
4329 \expandafter\def\Hy@gtemp
4330 }

4331 \ifHy@hyperfigures
4332 \Hy@Info{Hyper figures ON}%
4333 \else
4334 \Hy@Info{Hyper figures OFF}%
4335 \fi
4336 \ifHy@nesting
4337 \Hy@Info{Link nesting ON}%
4338 \else
4339 \Hy@Info{Link nesting OFF}%
4340 \fi
4341 \ifHy@hyperindex
4342 \Hy@Info{Hyper index ON}%
4343 \else
4344 \Hy@Info{Hyper index OFF}%
4345 \fi
4346 \ifHy@plainpages
4347 \Hy@Info{Plain pages ON}%
4348 \else
4349 \Hy@Info{Plain pages OFF}%
4350 \fi
4351 \ifHy@backref
4352 \Hy@Info{Backreferencing ON}%
4353 \else
4354 \Hy@Info{Backreferencing OFF}%
4355 \fi
4356 \ifHy@implicit
4357 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4358 \else
4359 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4360 \def\MaybeStopEarly{%
4361   \Hy@Message{Stopped early}%
4362   \Hy@AtBeginDocument{%
4363     \PDF@FinishDoc
4364     \gdef\PDF@FinishDoc{}}%
4365   }%
4366   \endinput
4367 }%
4368 \Hy@AtBeginDocument{%
4369   \let\autoref\ref
4370   \let\autopageref\pageref
4371   \ifx\@pdfpagemode\@empty
4372     \gdef\@pdfpagemode{UseNone}%
4373   \fi
4374   \global\Hy@backreffalse
4375 }%
4376 \Hy@AtEndOfPackage{%
4377   \global\let\ReadBookmarks\relax

```

```

4378 \global\let\WriteBookmarks\relax
4379 }%
4380 \fi
4381 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

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

```

4382 \@ifundefined{stockwidth}{\newdimen\stockwidth}{}
4383 \@ifundefined{stockheight}{\newdimen\stockheight}{}

4384 \Hy@AtEndOfPackage{%
4385 \ifpackageloaded{tex4ht}{%
4386 \def\Hy@driver{htex4ht}%
4387 \Hy@texhttrue
4388 }{}%

```

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.

```

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

```

```

4425     \Hy@WarningNoLine{%
4426       Wrong driver ``\Hy@driver.def';\MessageBreak
4427       XeTeX is running.\MessageBreak
4428       Forcing driver ``\Hy@temp.def' for XeTeX%
4429     }%
4430     \let\Hy@driver\Hy@temp
4431   \fi
4432 \fi
4433 \fi
4434 \fi
4435 \ifx\Hy@driver\@empty
4436 \else
4437   \def\Hy@temp{hhtex}%
4438   \ifhint
4439     \ifx\Hy@driver\Hy@temp
4440     \else
4441       \Hy@WarningNoLine{%
4442         Wrong driver ``\Hy@driver.def';\MessageBreak
4443         hitex is running.\MessageBreak
4444         Forcing driver ``\Hy@temp.def'%
4445       }%
4446       \let\Hy@driver\Hy@temp
4447     \fi
4448   \fi
4449 \fi
4450 \ifx\Hy@driver\@empty
4451 \else
4452   \def\Hy@temp{hvtexhtm}%
4453   \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4454     \ifx\Hy@driver\Hy@temp
4455     \else
4456       \Hy@WarningNoLine{%
4457         Wrong driver ``\Hy@driver.def';\MessageBreak
4458         VTeX is running in HTML mode.\MessageBreak
4459         Forcing driver ``\Hy@temp.def'%
4460       }%
4461       \let\Hy@driver\Hy@temp
4462     \fi
4463   \else
4464     \ifx\Hy@driver\Hy@temp
4465       \Hy@WarningNoLine{%
4466         Wrong driver ``\Hy@driver.def';\MessageBreak
4467         VTeX is not running in HTML mode.\MessageBreak
4468         Using default driver%
4469       }%
4470       \let\Hy@driver\@empty
4471     \fi
4472   \fi
4473 \fi

```

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

```

4474 \let\HyOpt@DriverType\ltx@empty
4475 \ifx\HyOpt@CustomDriver\ltx@empty
4476   \ifx\Hy@driver\@empty
4477     \def\HyOpt@DriverType{ (autodetected)}%

```

```

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

```

```

4532 \ifx\Hy@driver\Hy@defaultdriver
4533 \def\Hy@temp{hdvwind}%
4534 \ifx\Hy@temp\Hy@driver
4535 \kvsetkeys{Hyp}{colorlinks}%
4536 \PassOptionsToPackage{dviwindo}{color}%
4537 \fi
4538 \fi
4539 \fi
4540 \else
4541 \def\HyOpt@DriverType{ (custom)}%
4542 \let\Hy@driver\HyOpt@CustomDriver
4543 \fi
4544 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4545 \chardef\Hy@VersionChecked=0 %
4546 \input{\Hy@driver.def}%
4547 \ifcase\Hy@VersionChecked
4548 \Hy@VersionCheck{\Hy@driver.def}%
4549 \fi
4550 \let\@unprocessedoptions\relax
4551 \Hy@RestoreCatcodes
4552 \Hy@DisableOption{tex4ht}%
4553 \Hy@DisableOption{pdftex}%
4554 \Hy@DisableOption{nativepdf}%
4555 \Hy@DisableOption{dvipdfm}%
4556 \Hy@DisableOption{dvipdfmx}%
4557 \Hy@DisableOption{dvipdfmx-outline-open}%
4558 \Hy@DisableOption{pdfmark}%
4559 \Hy@DisableOption{dvips}%
4560 \Hy@DisableOption{hypertex}%
4561 \Hy@DisableOption{vtex}%
4562 \Hy@DisableOption{vtexpdfmark}%
4563 \Hy@DisableOption{dviwindo}%
4564 \Hy@DisableOption{dvipsone}%
4565 \Hy@DisableOption{textures}%
4566 \Hy@DisableOption{latex2html}%
4567 \Hy@DisableOption{ps2pdf}%
4568 \Hy@DisableOption{xetex}%
4569 \Hy@DisableOption{driverfallback}%
4570 \Hy@DisableOption{customdriver}%
4571 \Hy@DisableOption{pdfversion}%
4572 }

```

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.

```

4573 \newif\ifHy@DvipdfmxOutlineOpen
4574 \ifxetex
4575 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4576 \else
4577 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4578 \Hy@DvipdfmxOutlineOpenttrue
4579 \fi
4580 \fi
4581 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

4582 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4583 \else
4584 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4585 \Hy@DvipdfmxOutlineOpentru
4586 \fi
4587 \fi

```

15.4.2 Bookmarks

```

4588 \def\WriteBookmarks{0}
4589 \def\@bookmarkopenstatus#1{%
4590 \ifHy@bookmarksopen

```

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

```

4591 \ifnum#1<\expandafter\@firstofone\expandafter
4592 {\number\@bookmarkopenlevel} % explicit space
4593 \else
4594 -%
4595 \fi
4596 \else
4597 -%
4598 \fi
4599 }
4600 \ifHy@bookmarks
4601 \Hy@Info{Bookmarks ON}%
4602 \ifx\@pdfpagemode\@empty
4603 \def\@pdfpagemode{UseOutlines}%
4604 \fi
4605 \else
4606 \let\@bookmarkopenstatus\ltx@gobble
4607 \Hy@Info{Bookmarks OFF}%
4608 \Hy@AtEndOfPackage{%
4609 \global\let\ReadBookmarks\relax
4610 \global\let\WriteBookmarks\relax
4611 }%
4612 \ifx\@pdfpagemode\@empty
4613 \def\@pdfpagemode{UseNone}%
4614 \fi
4615 \fi
4616 \Hy@DisableOption{bookmarks}

```

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

```

4617 \def\Hy@CatcodeWrapper#1{%
4618 \let\Hy@endWrap\ltx@empty
4619 \def\TMP@EnsureCode##1##2{%
4620 \edef\Hy@endWrap{%
4621 \Hy@endWrap
4622 \catcode##1 \the\catcode##1\relax
4623 }%
4624 \catcode##1 ##2\relax
4625 }%
4626 \TMP@EnsureCode{10}{12}% ^^J
4627 \TMP@EnsureCode{33}{12}% !
4628 \TMP@EnsureCode{34}{12}% "

```

```

4629 \TMP@EnsureCode{36}{3}% $(math)
4630 \TMP@EnsureCode{38}{4}% & (alignment)
4631 \TMP@EnsureCode{39}{12}% '
4632 \TMP@EnsureCode{40}{12}% (
4633 \TMP@EnsureCode{41}{12}% )
4634 \TMP@EnsureCode{42}{12}% *
4635 \TMP@EnsureCode{43}{12}% +
4636 \TMP@EnsureCode{44}{12}% ,
4637 \TMP@EnsureCode{45}{12}% -
4638 \TMP@EnsureCode{46}{12}% .
4639 \TMP@EnsureCode{47}{12}% /
4640 \TMP@EnsureCode{58}{12}% :
4641 \TMP@EnsureCode{59}{12}% ;
4642 \TMP@EnsureCode{60}{12}% <
4643 \TMP@EnsureCode{61}{12}% =
4644 \TMP@EnsureCode{62}{12}% >
4645 \TMP@EnsureCode{63}{12}% ?
4646 \TMP@EnsureCode{91}{12}% [
4647 \TMP@EnsureCode{93}{12}% ]
4648 \TMP@EnsureCode{94}{7}% ^ (superscript)
4649 \TMP@EnsureCode{95}{8}% _ (subscript)
4650 \TMP@EnsureCode{96}{12}% `
4651 \TMP@EnsureCode{124}{12}% |
4652 \TMP@EnsureCode{126}{13}% ~ (active)
4653 #1\relax
4654 \Hy@EndWrap
4655 }

```

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

```

4656 \Hy@AtBeginDocument{%
4657   \ifHy@ocgcolorlinks
4658     \kvsetkeys{Hyp}{colorlinks}%
4659     \ifHy@pdfa
4660       \Hy@Warning{%
4661         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4662         using `colorlinks' instead of `ocgcolorlinks'%
4663       }%
4664       \Hy@ocgcolorlinksfalse
4665     \fi
4666   \fi
4667   \ifHy@ocgcolorlinks
4668   \else
4669     \Hy@DisableOption{ocgcolorlinks}%
4670   \fi
4671   \ifHy@colorlinks
4672     \def\@pdfborder{0 0 0}%
4673     \let\@pdfborderstyle\@empty
4674     \Hy@CatcodeWrapper{%
4675       \RequirePackage{color}%
4676     }%
4677     \def\Hy@colorlink#1{%
4678       \begingroup
4679       \HyColor@UseColor#1%
4680     }%

```



```

4681 \def\Hy@endcolorlink{\endgroup}%
4682 \Hy@Info{Link coloring ON}%
4683 \else
4684 \ifHy@frenchlinks
4685 \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
4686 \def\Hy@endcolorlink{\endgroup}%
4687 \Hy@Info{French linking ON}%
4688 \else

```

for grouping consistency:

```

4689 \def\Hy@colorlink#1{\begingroup}%
4690 \def\Hy@endcolorlink{\endgroup}%
4691 \Hy@Info{Link coloring OFF}%
4692 \fi
4693 \fi
4694 \Hy@DisableOption{colorlinks}%
4695 \Hy@DisableOption{frenchlinks}%
4696 \ifHy@texht
4697 \else

```

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

```

4698 \ifHy@implicit
4699 \let \T@Ref\HyRef@Ref
4700 \def\@refstar#1{%
4701 \NR@ref@showkeys{#1}%
4702 \HyRef@StarSetRef{#1}\@firstoffive
4703 }
4704 \def\@pagerefstar#1{%
4705 \NR@ref@showkeys{#1}%
4706 \HyRef@StarSetRef{#1}\@secondoffive
4707 }
4708 \def\@namerefstar#1{%
4709 \NR@ref@showkeys{#1}%
4710 \HyRef@StarSetRef{#1}\@thirdoffive
4711 }
4712 \def\@Refstar#1{%
4713 \NR@ref@showkeys{#1}%
4714 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
4715 }%
4716 \else
4717 \fi
4718 \fi
4719 }
4720 \Hy@AtBeginDocument{%
4721 \ifx\ReadBookmarks\relax
4722 \else
4723 \Hy@CatcodeWrapper\ReadBookmarks
4724 \fi
4725 }
4726 \ifHy@backref
4727 \RequirePackage{backref}%
4728 \else
4729 \let\Hy@backout\@gobble
4730 \fi

```

```

4731 \Hy@DisableOption{backref}
4732 \Hy@DisableOption{pagebackref}
4733 \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`.

```

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

```

```

4774     \hyper@@normalise{#1}^^A
4775   }^^A
4776   \else
4777     \ltx@ReturnAfterFi{^^A
4778     \hyper@@normalise{#1}{#2}^^A
4779   }^^A
4780   \fi
4781 }^^A
4782 \gdef\hyper@@normalise#1#2{^^A
4783   \edef\Hy@tempa{^^A
4784     \endgroup
4785     \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4786   }^^A
4787   \Hy@tempa
4788 }^^A
4789 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4790   #1^^A
4791   \ifx\limits#2\limits
4792   \else
4793     \ltx@ReturnAfterFi{^^A
4794     \Hy@RemovePercentCr #2\@nil
4795   }^^A
4796   \fi
4797 }^^A
4798 \endgroup
4799 \providecommand*\hyper@chars{%
4800   \let\#\hyper@hash
4801   \let\%\@percentchar
4802   \Hy@safe@activetrue
4803 }

4804 \def\hyperlink#1#2{%
4805   \hyper@@link{}{#1}{#2}%
4806 }

4807 \def\Hy@VerboseLinkStart#1#2{%
4808   \ifHy@verbose
4809     \begingroup
4810     \Hy@safe@activetrue
4811     \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
4812     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4813     \xdef\Hy@VerboseGlobalTemp{%
4814       \Hy@VerboseGlobalTemp, %
4815       line \the\inputlineno
4816     }%
4817     \endgroup
4818     \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4819     \@onelevel@sanitize\Hy@VerboseLinkInfo
4820   \fi
4821 }

4822 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4823 \def\Hy@VerboseLinkStop{%
4824   \ifHy@verbose
4825     \begingroup
4826     \edef\x{\endgroup

```

```

4827     \write\m@ne{%
4828         Package `hyperref' Info: %
4829         End of reference \Hy@VerboseLinkInfo.%
4830     }%
4831 }%
4832 \x
4833 \fi
4834 }

4835 \def\Hy@VerboseAnchor#1{%
4836     \ifHy@verbose
4837     \begingroup
4838         \Hy@safe@activetrue
4839         \Hy@Info{Anchor `\'HyperDestNameFilter{#1}'}%
4840     \endgroup
4841 \fi
4842 }

4843 \def\Hy@AllowHyphens{%
4844     \relax
4845     \ifhmode
4846         \penalty\@M
4847         \hskip\z@skip
4848     \fi
4849 }

4850 \DeclareRobustCommand*\href[1][]{%
4851     \begingroup
4852     \setkeys{href}{#1}%
4853     \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4854 }
4855 \def\Hy@href#{%
4856     \hyper@normalise\href@
4857 }
4858 \begingroup
4859     \catcode`\$=6 %
4860     \catcode`\#=12 %
4861     \gdef\href@#1{\expandafter\href@split$1##\}%
4862     \gdef\href@split$1##$2##$3\\$4{%
4863         \hyper@@link{$1}{$2}{$3}{$4}%
4864     \endgroup
4865 }%
4866 \endgroup

```

Option ‘page’.

```

4867 \define@key{href}{page}{%
4868     \def\Hy@href@page{#1}%
4869 }
4870 \let\Hy@href@page\@empty
4871 \newcount\c@Hy@tempcnt
4872 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4873 \def\Hy@MakeRemoteAction{%
4874     \ifx\Hy@href@page\@empty
4875         \def\Hy@href@page{0}%
4876     \else
4877         \setcounter{Hy@tempcnt}{\Hy@href@page}%

```

```

4878 \ifnum\c@Hy@tempcnt<\@ne
4879 \Hy@Warning{%
4880   Invalid page number (\theHy@tempcnt)\MessageBreak
4881   for remote PDF file.\MessageBreak
4882   Using page 1%
4883 }%
4884 \def\Hy@href@page{0}%
4885 \else
4886 \global\advance\c@Hy@tempcnt\m@ne
4887 \edef\Hy@href@page{\theHy@tempcnt}%
4888 \fi
4889 \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.

```

4890 \ifx\Hy@href@nextactionraw\@empty
4891 \else
4892 \Hy@pdfnewwindowsettrue
4893 \Hy@pdfnewwindowtrue
4894 \fi
4895 }

```

Option ‘pdfremotestartview’.

```

4896 \define@key{href}{pdfremotestartview}{%
4897 \setkeys{Hyp}{pdfremotestartview={#1}}}%
4898 }

```

Option ‘pdfnewwindow’.

```

4899 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4900 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4901 \newif\ifHy@href@ismap
4902 \define@key{href}{ismap}[true]{%
4903 \ltx@ifundefined{Hy@href@ismap#1}{%
4904 \Hy@Error{%
4905   Invalid value (#1) for key `ismap'.\MessageBreak
4906   Permitted values are `true' or `false'.\MessageBreak
4907   Ignoring `ismap'%
4908 }}\@ehc
4909 }{%
4910 \csname Hy@href@ismap#1\endcsname
4911 }%
4912 }

```

Option ‘nextactionraw’.

```

4913 \let\Hy@href@nextactionraw\@empty
4914 \define@key{href}{nextactionraw}{%
4915 \edef\Hy@href@nextactionraw{#1}%
4916 \ifx\Hy@href@nextactionraw\@empty
4917 \else
4918 \Hy@Match\Hy@href@nextactionraw{}{%
4919   ~(\HyPat@ObjRef/|<<.*[/S[/|. +>>|
4920   \[( ?\HyPat@ObjRef/|<<.*[/S[/|. +>>)+ ?])$%
4921   }-}{%
4922 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak

```

```

4923     \Hy@href@nextactionraw\MessageBreak
4924     The action is discarded%
4925   }%
4926 }%
4927 \ifx\Hy@href@nextactionraw\@empty
4928 \else
4929   \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4930 \fi
4931 \fi
4932 }
4933 \def\HyPat@ObjRef/{.+}

```

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

```

4934 \RequirePackage{url}
4935 \let\HyOrg@url\url
4936 \def\Hurl{\begingroup \Url}
4937 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
4938 \def\nolinkurl@#1{\Hurl{#1}}
4939 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
4940 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4941 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
4942 \providecommand\hyper@image[2]{#2}

4943 \def\hypertarget#1#2{%
4944   \ifHy@nesting
4945     \hyper@@anchor{#1}{#2}%
4946   \else
4947     \hyper@@anchor{#1}{\relax}#2%
4948   \fi
4949 }

```

`\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.

```

4950 \DeclareRobustCommand*{\hyperref}{%
4951   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
4952 }
4953 \def\Hy@babelnormalise#1[#2]{%
4954   \begingroup
4955     \Hy@safe@activestruer
4956     \let\protect\@unexpandable@protect
4957     \edef\Hy@tempa{%
4958       \endgroup
4959       \noexpand#1[{#2}]}%
4960   }%
4961   \Hy@tempa
4962 }
4963 \def\@hyperref{\hyper@normalise\@hyperref}
4964 \def\@hyperref#1#2#3{%
4965   \edef\ref@one{\ifx\\#2\\\else#2.\fi#3}%

```

```

4966 \expandafter\tryhyper@link\ref@one\{\#1}%
4967 }
4968 \def\tryhyper@link#1\#2{%
4969 \hyper@@link{#2}{#1}%
4970 }

4971 \def\hyperdef{\@ifnextchar{\label@hyperdef}{\@hyperdef}}
4972 \def\@hyperdef#1#2#3{%, category, name, text
4973 \ifx\#1\%
4974 \def\Hy@AnchorName{#2}%
4975 \else
4976 \def\Hy@AnchorName{#1.#2}%
4977 \fi
4978 \ifHy@nesting
4979 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4980 \else
4981 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4982 \fi
4983 }

```

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.

```

4984 \let\hyperrefundefinedlink\@firstofone
4985 \def\label@hyperref[#1]{%
4986 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4987 }%
4988 \def\label@@hyperref#1#2#3{%
4989 \ifx#1\relax
4990 \protect\G@refundefinedtrue
4991 \@latex@warning{%
4992 Hyper reference `#2' on page \thepage \space undefined%
4993 }%
4994 \begingroup
4995 \hyperrefundefinedlink{#3}%
4996 \endgroup
4997 \else
4998 \hyper@@link{\expandafter\@fifthoffive#1}%
4999 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5000 \fi
5001 }
5002 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5003 % anchor text
5004 \@bsphack
5005 \ifx\#2\%
5006 \def\Hy@AnchorName{#3}%
5007 \else
5008 \def\Hy@AnchorName{#2.#3}%
5009 \fi
5010 \if@filesw
5011 \protected@write\@auxout{}{%
5012 \string\newlabel{#1}{\{\}\}\{\Hy@AnchorName\}\}%
5013 }%
5014 \fi
5015 \@esphack

```

```

5016 \ifHy@nesting
5017   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5018 \else
5019   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5020 \fi
5021 }

```

`\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`

```

5022 \ExplSyntaxOn
5023 \cs_new:Npn \hyperget #1 #2
5024 {
5025   \use:c { __hyp_get_#1:n } { #2}
5026 }
5027
5028 \cs_new:Npn \__hyp_get_anchor:n #1
5029 {
5030   \HyperDestNameFilter
5031   {
5032     \cs_if_exist:cTF {r@#1}
5033     {
5034       \tl_item:cn {r@#1}{4}
5035     }
5036     {
5037       Doc-Start
5038     }
5039   }
5040 }
5041 \cs_new:Npn \__hyp_get_pageanchor:n #1
5042 {
5043   \HyperDestNameFilter
5044   {
5045     \cs_if_exist:cTF {r@#1}
5046     {
5047       page. \tl_item:cn {r@#1}{2}
5048     }
5049     {
5050       Doc-Start
5051     }
5052   }
5053 }
5054 \cs_new:Npn \__hyp_get_currentanchor:n #1
5055 {
5056   \HyperDestNameFilter { \@currentHref }
5057 }
5058 \ExplSyntaxOff

```

16.1 Link box support for XeTeX


```

5059 \newdimen\XeTeXLinkMargin
5060 \setlength{\XeTeXLinkMargin}{2pt}
5061 \ifxetex
5062   \font\XeTeXLink@font=pzdr at 1sp\relax
5063   \newcommand*{\XeTeXLink@space}{%
5064     \begingroup
5065       \XeTeXLink@font
5066       \@xxxii
5067     \endgroup
5068   }%
5069   \newcommand{\XeTeXLinkBox}[1]{%
5070     \begingroup
5071       \leavevmode
5072       \sbox\z@{#1}%
5073       \begingroup
5074         \dimen@=\dp\z@
5075         \advance\dimen@\XeTeXLinkMargin
5076         \setbox\tw@=\llap{%
5077           \hb@xt@\XeTeXLinkMargin{%
5078             \lower\dimen@\hbox{\XeTeXLink@space}%
5079           \hss
5080         }%
5081       }%
5082       \dp\tw@=\dp\z@
5083       \ht\tw@=\ht\z@
5084       \copy\tw@
5085     \endgroup
5086     \copy\z@
5087     \dimen@=\ht\z@
5088     \advance\dimen@\XeTeXLinkMargin
5089     \setbox\tw@=\rlap{%
5090       \hb@xt@\XeTeXLinkMargin{%
5091         \hss
5092         \raise\dimen@\hbox{\XeTeXLink@space}%
5093       }%
5094     }%
5095     \dp\tw@=\dp\z@
5096     \ht\tw@=\ht\z@
5097     \copy\tw@
5098   \endgroup
5099 }%
5100 \else
5101   \newcommand*{\XeTeXLinkBox}[1]{%
5102     \begingroup
5103       \leavevmode
5104       \sbox\z@{#1}%
5105       \copy\z@
5106     \endgroup
5107   }%
5108 \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.

```

5109 \def\hyper@@link{\let\Hy@reserved@a\relax
5110 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5111 }
5112 % #1: type
5113 % #2: URL
5114 % #3: destination name
5115 % #4: text
5116 \def\hyper@link@[#1]#2#3#4{%
5117 \ltx@ifempty{#4}{% link text
5118   \Hy@Warning{Suppressing empty link}%
5119 }{%
5120   \begingroup
5121     \protected@edef\Hy@tempa{#2}%
5122     \edef\Hy@tempb{#3}%
5123     \ifx\Hy@tempa\ltx@empty
5124       \ifx\Hy@tempb\ltx@empty
5125         \Hy@Warning{Suppressing link with empty target}%
5126         \toks@{%
5127           \endgroup
5128           \ltx@secondoftwo
5129         }%
5130       \else
5131         \toks@{%
5132           \endgroup
5133           \hyper@link{#1}%
5134         }%
5135       \fi
5136     \else
5137       \toks@{%
5138         \endgroup
5139         \expandafter\hyper@readexternallink#2\\{#1}%
5140       }%
5141     \fi
5142     \Hy@safe@activesfalse
5143     \toks@\expandafter{%
5144       \the\expandafter\toks@
5145       \expandafter{\Hy@tempb}{#4}%
5146     }%
5147     \the\toks@
5148   }%
5149 }

```

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.

```

5150 \def\hyper@readexternallink#1\\#2#3#4{%

```

```

5151 \begingroup
5152 \let\\\relax
5153 \expandafter\endgroup
5154 \expandafter\@hyper\@readexternallink#1\{\#2}\{\#3}\{\#4}%
5155 }
5156 \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.

```

5157 \@hyper\@readexternallink{\#2}\{\#3}\{\#4}\#1::\{\#1}%
5158 }

```

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

```

5159 \def\@pdftempwordfile{file}%
5160 \def\@pdftempwordrun{run}%
5161 \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**:

```

5162 \ifx\\\#6\\\%
5163 \@hyper\linkfile file:\#7\\\{\#3}\{\#2}\{\#7}%
5164 \else
5165 \ifx\\\#4\\\%
5166 \@hyper\linkfile file:\#7\\\{\#3}\{\#2}\{\#7}%
5167 \else

```

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

```

5168 \def\@pdftempa{\#4}%
5169 \ifx\@pdftempa\@pdftempwordfile
5170 \@hyper\linkfile\#7\\\{\#3}\{\#2}\{\#7}%
5171 \else

```

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

```

5172 \ifx\@pdftempa\@pdftempwordrun
5173 \ifHy@pdfa
5174 \Hy@Error{%
5175 PDF/A: Launch action is prohibited%
5176 }\@ehc
5177 \begingroup
5178 \leavevmode
5179 \#2%
5180 \endgroup

```

```

5181         \else
5182         \@hyper@launch#7\{\#3}\#2}%
5183         \fi
5184     \else

```

otherwise its a URL

```

5185         \hyper@linkurl{\#3}\#7\ifx\#2\else\hyper@hash#2\fi}%
5186     \fi
5187 \fi
5188 \fi
5189 \fi
5190 }

```

By default, turn run: into file:

```

5191 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5192 \hyper@linkurl{\#2}{%
5193 \Hy@linkfileprefix
5194 #1%
5195 \ifx\#3\%
5196 \else
5197 \hyper@hash
5198 #3%
5199 \fi
5200 }%
5201 }

```

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

```

5202 \def\@hyper@linkfile file:#1\#2#3#4{%
5203 %file url,link string, name, original uri
5204 \filename@parse{\#1}%
5205 \ifx\filename@ext\relax
5206 \edef\filename@ext{\XR@ext}%
5207 \fi
5208 \def\use@file{\filename@area\filename@base.\filename@ext}%
5209 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5210 \hyper@linkfile{\#2}{\use@file}\#3}%
5211 }{%
5212 \ifx\@baseurl\@empty
5213 \hyper@linkurl{\#2}{%
5214 #4\ifx\#3\else\hyper@hash#3\fi
5215 }%
5216 \else
5217 \hyper@linkurl{\#2}{\use@file\ifx\#3\else\hyper@hash#3\fi}%
5218 \fi
5219 }%
5220 }

5221 \def\Hy@ifStringEndsWith#1#2{%
5222 \begingroup
5223 \edef\x{\#1}%
5224 \@onelevel@sanitize\x
5225 \edef\x{.\x}%
5226 \edef\y{\#2}%
5227 \@onelevel@sanitize\y
5228 \edef\y{.\y}%

```

```

5229 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5230 \endgroup
5231 \ifx\relax##2\relax
5232 \expandafter\ltx@secondoftwo
5233 \else
5234 \expandafter\ltx@firstoftwo
5235 \fi
5236 }%
5237 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5238 }

5239 \def\Hy@StringLocalhost{localhost}
5240 \@onelevel@sanitize\Hy@StringLocalhost
5241 \def\Hy@CleanupFile#1{%
5242 \edef#1{#1}%
5243 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5244 }
5245 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5246 \begingroup
5247 \toks@{\endgroup}%
5248 \def\x{#1}%
5249 \ifx\x\@empty
5250 \def\x{#2}%
5251 \ifx\x\@empty
5252 \toks@{\endgroup\def#5{/#3}}%
5253 \else
5254 \@onelevel@sanitize\x
5255 \ifx\x\Hy@StringLocalhost
5256 \toks@{\endgroup\def#5{/#3}}%
5257 \fi
5258 \fi
5259 \fi
5260 \the\toks@
5261 }

```

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.

```

5262 \long\def\hyper@@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5263 \long\def\@hyper@@@anchor#1\relax#2#3\relax{%
5264 \ifx\#1\%
5265 #2\Hy@Warning{Ignoring empty anchor}%
5266 \else
5267 \def\anchor@spot{#2#3}%
5268 \let\put@me@back\@empty
5269 \ifx\relax#2\relax
5270 \else
5271 \ifHy@nesting
5272 \else
5273 \ifcat a\noexpand#2\relax
5274 \else

```

```

5275     \ifcat 0\noexpand#2 \relax
5276     \else
5277 %     \typeout{Anchor start is not alphanumeric %
5278 %         on input line\the\inputlineno%
5279 %     }%
5280     \let\anchor@spot\@empty
5281     \def\put@me@back{#2#3}%
5282     \fi
5283     \fi
5284     \fi
5285     \fi
5286     \ifHy@activeanchor
5287     \anchor@spot
5288     \else
5289     \hyper@anchor{#1}%
5290     \fi
5291     \expandafter\put@me@back
5292     \fi
5293     \let\anchor@spot\@empty
5294 }
5295 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5296 \ifHy@destlabel

\hyper@newdestlabel

5297 \def\hyper@newdestlabel#1#2{%
5298     \begingroup
5299     \Hy@safe@activetrue
5300     \edef\x{\endgroup
5301         \noexpand\@newl@bel{HyDL}{#1}{#2}%
5302     }%
5303     \x
5304 }%

\hyper@destlabel@hook

5305 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename

5306 \newcommand*\Hy@DestRename[2]{%
5307     \ltx@ifundefined{HyDL!#1}{%
5308         \begingroup
5309         \Hy@safe@activetrue
5310         \edef\dest@name{#1}%
5311         \edef\label@name{#2}%
5312         \hyper@destlabel@hook
5313         \Hy@IsNotEmpty{dest@name}{%
5314             \Hy@IsNotEmpty{label@name}{%
5315                 \global\expandafter
5316                 \let\csname HyDL!#1\endcsname\ltx@empty
5317                 \if@files
5318                 \protected@write\@auxout{}{%

```

```

5319         \string\hyper@newdestlabel
5320         {#1}%
5321         {\label@name}%
5322     }%
5323     \fi
5324 }%
5325 }%
5326 \endgroup
5327 }{}%
5328 }%

```

\HyperDestRename

```

5329 \newcommand*{\HyperDestRename}[2]{%
5330     \AtBeginDocument{%
5331         \Hy@DestRename{#1}{#2}%
5332     }%
5333 }%
5334 \AtBeginDocument{%
5335     \let\HyperDestRename\Hy@DestRename
5336 }%

```

\Hy@IsNotEmpty

```

5337 \def\Hy@IsNotEmpty#1{%
5338     \ltx@ifundefined{#1}\ltx@gobble{%
5339         \expandafter\ifx\csname#1\endcsname\ltx@empty
5340         \expandafter\ltx@gobble
5341     \else
5342         \expandafter\ltx@firstofone
5343     \fi
5344 }%
5345 }%

5346 \ltx@GlobalAppendToMacro\label@hook{%
5347     \HyperDestRename\@currentHref\label@name
5348 }%

```

\HyperDestLabelReplace

```

5349 \def\HyperDestLabelReplace#1{%
5350     \ltx@ifundefined{HyDL@#1}{%
5351         #1%
5352     }{%
5353         \csname HyDL@#1\endcsname
5354     }%
5355 }%

```

\HyperDestNameFilter

```

5356 \let\HyperDestNameFilter\HyperDestLabelReplace
5357 \else

```

\hyper@newdestlabel

```

5358 \let\hyper@newdestlabel\ltx@gobbletwo

```

\HyperDestLabelReplace

```

5359 \let\HyperDestLabelReplace\ltx@firstofone

```

\HyperDestRename

```
5360 \let\HyperDestRename\ltx@gobbletwo
```

```
5361 \fi
```

```
5362 \Hy@DisableOption{destlabel}
```

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

```
5363 \AddToHook{include/before}
```

```
5364 {\immediate\write\@partaux{\string\providecommand\string\hyper@newdest-  
label[2]{}}}
```

```
5365 \AddToHook{begindocument}
```

```
5366 {\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.

```
5367 \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

```
5368 \def\HyField@NewFlag#1#2{%
```

```
5369 \lowercase{\HyField@NewOption{#2}}%
```

```
5370 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
```

```
5371 }
```

\HyField@NewFlagOnly

```
5372 \def\HyField@NewFlagOnly#1#2{%
```

```
5373 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
```

```
5374 }
```

\HyField@NewOption #1: option name

```
5375 \def\HyField@NewOption#1{%
```

```
5376 \expandafter\newif\csname ifFld@#1\endcsname
```

```
5377 \define@key{Field}{#1}[true]{%
```

```
5378 \lowercase{\Field@boolkey{##1}}{#1}%
```



```

5379 }%
5380 }

```

`\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
5381 \def\HyField@NewBitsetFlag#1#2#3#4{%
5382   \begingroup
5383     \count@=#4\relax
5384     \advance\count@\m@ne
5385     \def\x##1{%
5386       \endgroup
5387       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5388       \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5389         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5390           (\number#4) #2%
5391         }%
5392       \else
5393         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5394           \csname HyField@#3@#1\endcsname
5395           /#2%
5396         }%
5397       \fi
5398     }%
5399   \expandafter\x\expandafter{\the\count@}%
5400 }

```

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

```

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

```

`\HyField@@UseFlag`

```

5404 \def\HyField@@UseFlag#1#2{%
5405   \bitsetSetValue{HyField@#2}{%
5406     \csname HyField@#2@#1\endcsname
5407   }{%
5408     \csname ifFld@#1\endcsname 1\else 0\fi
5409   }%
5410 }

```

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

```

5411 \def\HyField@SetFlag#1#2{%
5412   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5413 }

```

`\HyField@@SetFlag`

```

5414 \def\HyField@@SetFlag#1#2{%
5415   \bitsetSetValue{HyField@#2}{%
5416     \csname HyField@#2@#1\endcsname
5417   }{1}%
5418 }

```

\HyField@PrintFlags

```
5419 \def\HyField@PrintFlags#1#2{%
5420   \ifHy@verbose
5421     \begingroup
5422     \let\Hy@temp@\empty
5423     \let\MessageBreak\relax
5424     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5425     \bitsetGetSetBitList{HyField@#1}\do{%
5426       \edef\Hy@temp{%
5427         \Hy@temp
5428         \csname HyField@#1@\x\endcsname\MessageBreak
5429       }%
5430     }%
5431   \edef\x{\endgroup
5432     \noexpand\Hy@Info{%
5433       Field flags: %
5434       \expandafter\ifx\@car#1\@nil S\else/\fi
5435       #1 %
5436       \bitsetGetDec{HyField@#1} %
5437       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5438       \Hy@temp
5439       for #2%
5440     }%
5441   }\x
5442 \fi
5443 }
```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```
5444 \HyField@NewFlag{Ff}{ReadOnly}{1}
5445 \HyField@NewFlag{Ff}{Required}{2}
5446 \HyField@NewFlag{Ff}{NoExport}{3}
```

“Table 8.75 Field flags specific to button fields”

```
5447 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5448 \HyField@NewFlag{Ff}{Radio}{16}
5449 \HyField@NewFlag{Ff}{Pushbutton}{17}
5450 \HyField@NewFlag{Ff}{RadiosInUnison}{26}
```

“Table 8.77 Field flags specific to text fields”

```
5451 \HyField@NewFlag{Ff}{Multiline}{13}
5452 \HyField@NewFlag{Ff}{Password}{14}
5453 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5454 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5455 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5456 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5457 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5
```

“Table 8.79 field flags specific to choice fields”

```
5458 \HyField@NewFlag{Ff}{Combo}{18}
5459 \HyField@NewFlag{Ff}{Edit}{19}
5460 \HyField@NewFlag{Ff}{Sort}{20}
5461 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5462 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
```

5463 \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.

```
5464 \newif\ifFld@popdown
5465 \define@key{Field}{popdown}[true]{%
5466   \lowercase{\Field@boolkey{#1}}{popdown}%
5467 }
```

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.

```
5468 \HyField@NewFlag{F}{Invisible}{1}
5469 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5470 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5471 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5472 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5473 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5474 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5475 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5476 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5477 \ifHy@pdfa
5478   \def\HyField@PDFAFFlagWarning#1#2{%
5479     \Hy@Warning{%
5480       PDF/A: Annotation flag `#1' must\MessageBreak
5481       be set to `#2'%
5482     }%
5483   }%
5484   \Fld@invisiblefalse
5485   \def\Fld@invisibletrue{%
5486     \HyField@PDFAFFlagWarning{invisible}{false}%
5487   }%
5488   \Fld@hiddenfalse
5489   \def\Fld@hiddentrue{%
5490     \HyField@PDFAFFlagWarning{hidden}{false}%
5491   }%
5492   \Fld@printtrue
5493   \def\Fld@printfalse{%
5494     \HyField@PDFAFFlagWarning{print}{true}%
5495   }%
5496   \Fld@nozoomtrue
5497   \def\Fld@nozoomfalse{%
5498     \HyField@PDFAFFlagWarning{nozoom}{true}%
5499   }%
5500   \Fld@norotatetrue
5501   \def\Fld@norotatefalse{%
5502     \HyField@PDFAFFlagWarning{norotate}{true}%
5503   }%
5504   \Fld@noviewfalse
5505   \def\Fld@noviewtrue{%
5506     \HyField@PDFAFFlagWarning{noview}{false}%
```

```

5507 }%
5508 \fi

```

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

```

5509 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5510 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5511 \HyField@NewFlag{Submit}{GetMethod}{4}
5512 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5513 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5514 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5515 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5516 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5517 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5518 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5519 \HyField@NewFlag{Submit}{ExclFKey}{12}
5520 \HyField@NewFlag{Submit}{EmbedForm}{14}

5521 \define@key{Field}{export}{%
5522   \lowercase{\def\Hy@temp{#1}}%
5523   \@ifundefined{Fld@export@\Hy@temp}{%
5524     \@onelevel@sanitize\Hy@temp
5525     \Hy@Error{%
5526       Unknown export format `'\Hy@temp'.\MessageBreak
5527       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5528     }\@ehc
5529   }%
5530   \let\Fld@export\Hy@temp
5531 }%
5532 }
5533 \def\Fld@export{fdf}
5534 \@namedef{Fld@export@fdf}{0}%
5535 \@namedef{Fld@export@html}{1}%
5536 \@namedef{Fld@export@xfdf}{2}%
5537 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

`\HyField@FlagsSubmit`

```

5538 \def\HyField@FlagsSubmit{%
5539   \bitsetReset{HyField@Submit}%
5540   \ifcase\@nameuse{Fld@export@\Fld@export} %
5541     % FDF
5542     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5543     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5544     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5545     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5546     \HyField@UseFlag{Submit}{CanonicalFormat}%
5547     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5548     \HyField@UseFlag{Submit}{ExclFKey}%
5549     \HyField@UseFlag{Submit}{EmbedForm}%
5550   \or % HTML
5551     \HyField@SetFlag{Submit}{ExportFormat}%
5552     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5553     \HyField@UseFlag{Submit}{GetMethod}%

```

```

5554 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5555 \HyField@UseFlag{Submit}{CanonicalFormat}%
5556 \or % XFDF
5557 \HyField@SetFlag{Submit}{XFDF}%
5558 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5559 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5560 \HyField@UseFlag{Submit}{CanonicalFormat}%
5561 \or % PDF
5562 \HyField@SetFlag{Submit}{SubmitPDF}%
5563 \HyField@UseFlag{Submit}{GetMethod}%
5564 \fi
5565 \HyField@PrintFlags{Submit}{submit button field}%
5566 \bitsetIsEmpty{HyField@Submit}{%
5567 \let\Fld@submitflags\tx@empty
5568 }{%
5569 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5570 }%
5571 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5572 \def\HyField@FlagsAnnot#1{%
5573 \bitsetReset{HyField@F}%
5574 \HyField@UseFlag{F}{Invisible}%
5575 \HyField@UseFlag{F}{Hidden}%
5576 \HyField@UseFlag{F}{Print}%
5577 \HyField@UseFlag{F}{NoZoom}%
5578 \HyField@UseFlag{F}{NoRotate}%
5579 \HyField@UseFlag{F}{NoView}%
5580 \HyField@UseFlag{F}{Locked}%
5581 \HyField@UseFlag{F}{ToggleNoView}%
5582 \HyField@UseFlag{F}{LockedContents}%
5583 \HyField@PrintFlags{F}{#1}%
5584 \bitsetIsEmpty{HyField@F}{%
5585 \let\Fld@annotflags\tx@empty
5586 }{%
5587 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5588 }%
5589 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5590 \def\HyField@FlagsPushButton{%
5591 \HyField@FlagsAnnot{push button field}%
5592 \bitsetReset{HyField@Ff}%
5593 \HyField@UseFlag{Ff}{ReadOnly}%
5594 \HyField@UseFlag{Ff}{Required}%
5595 \HyField@UseFlag{Ff}{NoExport}%
5596 \HyField@SetFlag{Ff}{PushButton}%
5597 \HyField@PrintFlags{Ff}{push button field}%
5598 \bitsetIsEmpty{HyField@Ff}{%

```

```

5599 \let\Fld@flags\ltx@empty
5600 }{%
5601 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5602 }%
5603 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

5604 \def\HyField@FlagsCheckBox{%
5605 \HyField@FlagsAnnot{check box field}%
5606 \bitsetReset{HyField@Ff}%
5607 \HyField@UseFlag{Ff}{ReadOnly}%
5608 \HyField@UseFlag{Ff}{Required}%
5609 \HyField@UseFlag{Ff}{NoExport}%
5610 \HyField@PrintFlags{Ff}{check box field}%
5611 \bitsetIsEmpty{HyField@Ff}{%
5612 \let\Fld@flags\ltx@empty
5613 }{%
5614 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5615 }%
5616 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

5617 \def\HyField@FlagsRadioButton{%
5618 \HyField@FlagsAnnot{radio button field}%
5619 \bitsetReset{HyField@Ff}%
5620 \HyField@UseFlag{Ff}{ReadOnly}%
5621 \HyField@UseFlag{Ff}{Required}%
5622 \HyField@UseFlag{Ff}{NoExport}%
5623 \HyField@UseFlag{Ff}{NoToggleToOff}%
5624 \HyField@SetFlag{Ff}{Radio}%
5625 \HyField@UseFlag{Ff}{RadiosInUnison}%
5626 \HyField@PrintFlags{Ff}{radio button field}%
5627 \bitsetIsEmpty{HyField@Ff}{%
5628 \let\Fld@flags\ltx@empty
5629 }{%
5630 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5631 }%
5632 }

```

19.1.7 Text fields

\HyField@FlagsText

```

5633 \def\HyField@FlagsText{%
5634 \HyField@FlagsAnnot{text field}%
5635 \bitsetReset{HyField@Ff}%
5636 \HyField@UseFlag{Ff}{ReadOnly}%
5637 \HyField@UseFlag{Ff}{Required}%
5638 \HyField@UseFlag{Ff}{NoExport}%
5639 \HyField@UseFlag{Ff}{Multiline}%

```

```

5640 \HyField@UseFlag{Ff}{Password}%
5641 \HyField@UseFlag{Ff}{FileSelect}%
5642 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5643 \HyField@UseFlag{Ff}{DoNotScroll}%
5644 \ifFld@comb
5645 \ifcase0\ifFld@multiline
5646 \else\ifFld@password
5647 \else\ifFld@fileselect
5648 \else 1\fi\fi\fi\relax
5649 \Hy@Error{%
5650 Field option `comb' cannot used together with\MessageBreak
5651 `multiline', `password', or `fileselect'%
5652 }\@ehc
5653 \else
5654 \HyField@UseFlag{Ff}{Comb}%
5655 \fi
5656 \fi
5657 \HyField@UseFlag{Ff}{RichText}%
5658 \HyField@PrintFlags{Ff}{text field}%
5659 \bitsetIsEmpty{HyField@Ff}{%
5660 \let\Fld@flags\ltx@empty
5661 }{%
5662 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5663 }%
5664 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

5665 \def\HyField@FlagsChoice{%
5666 \HyField@FlagsAnnot{choice field}%
5667 \bitsetReset{HyField@Ff}%
5668 \HyField@UseFlag{Ff}{ReadOnly}%
5669 \HyField@UseFlag{Ff}{Required}%
5670 \HyField@UseFlag{Ff}{NoExport}%
5671 \HyField@UseFlag{Ff}{Combo}%
5672 \ifFld@combo
5673 \HyField@UseFlag{Ff}{Edit}%
5674 \fi
5675 \HyField@UseFlag{Ff}{Sort}%
5676 \HyField@UseFlag{Ff}{MultiSelect}%
5677 \ifFld@combo
5678 \ifFld@edit
5679 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5680 \fi
5681 \fi
5682 \HyField@UseFlag{Ff}{CommitOnSelChange}%
5683 \HyField@PrintFlags{Ff}{choice field}%
5684 \bitsetIsEmpty{HyField@Ff}{%
5685 \let\Fld@flags\ltx@empty
5686 }{%
5687 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5688 }%
5689 }

```

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`.

```

5690 \def\HyField@PDFChoices#1{%
5691   \begingroup
5692     \global\let\Fld@choices\ltx@empty
5693     \let\HyTmp@optlist\ltx@empty
5694     \let\HyTmp@optitem\relax
5695     \count@=0 %
5696     \kv@parse{#1}{%
5697       \Hy@pdfstringdef\kv@key\kv@key
5698       \ifx\kv@value\relax
5699         \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
5700           \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}}%
5701         \else
5702           \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5703         \fi
5704       \else
5705         \Hy@pdfstringdef\kv@value\kv@value
5706         \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}}%
5707       \fi
5708     \edef\HyTmp@optlist{%
5709       \HyTmp@optlist
5710       \HyTmp@optitem{\the\count@}{\kv@key}0%
5711     }%
5712     \advance\count@ by 1 %
5713     \@gobbletwo
5714   }%
5715   \xdef\Fld@choices{/Opt{\Fld@choices}}%
5716   \ifFld@multiselect
5717     \HyField@@PDFChoices{DV}\Fld@default
5718     \HyField@@PDFChoices{V}\Fld@value
5719   \else
5720     \ifx\Fld@default\relax
5721     \else
5722       \pdfstringdef\Hy@gtemp\Fld@default
5723       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5724     \fi
5725     \ifx\Fld@value\relax
5726     \else
5727       \pdfstringdef\Hy@gtemp\Fld@value
5728       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5729     \fi
5730   \fi
5731 \endgroup
5732 }
```

`\HyField@@PDFChoices`

```

5733 \def\HyField@@PDFChoices#1#2{%
5734   \ifx#2\relax
5735   \else
```



```

5736 \count@=0 %
5737 \def\HyTmp@optitem##1##2##3{%
5738 \def\HyTmp@key{##2}%
5739 \ifx\HyTmp@key\Hy@gtemp
5740 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5741 \HyTmp@optlist
5742 \HyTmp@optitem{##1}{##2}1%
5743 }%
5744 \let\HyTmp@found=Y%
5745 \else
5746 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5747 \HyTmp@optlist
5748 \HyTmp@optitem{##1}{##2}##3%
5749 }%
5750 \fi
5751 }%
5752 \expandafter\comma@parse\expandafter{#2}{%
5753 \pdfstringdef\Hy@gtemp\comma@entry
5754 \let\HyTmp@found=N %
5755 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5756 \HyTmp@optlist
5757 \ifx\HyTmp@found Y%
5758 \advance\count@ by 1 %
5759 \else
5760 \@onelevel@sanitize\comma@entry
5761 \PackageWarning{hyperref}{%
5762 \string\ChoiceBox: Ignoring value `\'comma@entry',%
5763 \MessageBreak
5764 it cannot be found in the choices%
5765 }%
5766 \fi
5767 \@gobble
5768 }%
5769 \def\HyTmp@optitem##1##2##3{%
5770 \ifnum##3=1 %
5771 (##2)%
5772 \fi
5773 }%
5774 \ifcase\count@
5775 \or
5776 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5777 \else
5778 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5779 \ifx#1V%
5780 \def\HyTmp@optitem##1##2##3{%
5781 \ifnum##3=1 %
5782 \@firstofone{ ##1}%
5783 \fi
5784 }%
5785 \edef\HyTmp@optlist{\HyTmp@optlist}%
5786 \xdef\Fld@choices{%
5787 \Fld@choices
5788 /I\expandafter\@firstofone\HyTmp@optlist}%
5789 }%

```

```

5790     \fi
5791     \fi
5792 \fi
5793 }

```

19.3 Forms

\HyField@SetKeys

```

5794 \def\HyField@SetKeys{%
5795   \kvsetkeys{Field}%
5796 }

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

```

```

5839 \fi
5840 }
5841 \define@key{Form}{method}{%
5842 \lowercase{\def\Hy@temp{#1}}}%
5843 \@ifundefined{Form@method@\Hy@temp}{%
5844 \onelevel@sanitize\Hy@temp
5845 \Hy@Error{%
5846   Unknown method ``\Hy@temp'.\MessageBreak
5847   Known values are `post' and `get'%
5848 }\@ehc
5849 }{%
5850 \let\Form@method\Hy@temp
5851 \ifcase\@nameuse{Form@method@\Hy@temp} %
5852 \Fld@getmethodfalse
5853 \else
5854 \Fld@getmethodtrue
5855 \fi
5856 }%
5857 }
5858 \def\Form@method{}
5859 \@namedef{Form@method@post}{0}
5860 \@namedef{Form@method@get}{1}

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

```

```

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

```

```

5947 \define@key{Field}{width}{%
5948   \def\Fld@width{#1}%
5949   \Field@Width#1\setbox0=\hbox{m}%
5950 }
5951 \define@key{Field}{maxlen}{%
5952   \def\Fld@maxlen{#1}%
5953 }
5954 \define@key{Field}{menulength}{%
5955   \Fld@menulength=#1\relax
5956 }
5957 \define@key{Field}{height}{%
5958   \def\Fld@height{#1}%
5959 }
5960 \define@key{Field}{charsize}{%
5961   \setlength{\Fld@charsize}{#1}%
5962 }
5963 \define@key{Field}{borderwidth}{%
5964   \Hy@defaultbp\Fld@borderwidth{#1}%
5965 }
5966 \def\Hy@defaultbp#1#2{%
5967   \begingroup
5968   \afterassignment\Hy@defaultbpAux
5969   \dimen@=#2bp\relax{#1}{#2}%
5970 }
5971 \def\Hy@defaultbpAux#1\relax#2#3{%
5972   \ifx!#1!%
5973     \endgroup
5974     \def#2{#3}%
5975   \else
5976     \edef\x{\endgroup
5977       \def\noexpand#2{%
5978         \strip@pt\dimexpr\dimen@*800/803\relax
5979       }%
5980     }\x
5981   \fi
5982 }%
5983 \define@key{Field}{borderstyle}{%
5984   \let\Hy@temp\Fld@borderstyle
5985   \def\Fld@borderstyle{#1}%
5986   \Hy@Match\Fld@borderstyle{}{%
5987     ^[SDBIU]$%
5988   }{}{%
5989     \Hy@Warning{%
5990       Invalid value `\'@pdfborderstyle'\MessageBreak
5991       for option `pdfborderstyle'. Valid values:\MessageBreak
5992       \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
5993       \space\space I (Inset), U (Underline)\MessageBreak
5994       Option setting is ignored%
5995     }%
5996     \let\Fld@borderstyle\Hy@temp
5997   }%
5998 }
5999 \define@key{Field}{bordersep}{%
6000   \def\Fld@bordersep{#1}%

```

```

6001 }
6002 \define@key{Field}{default}{%
6003   \Hy@pdfstringdef\Fld@default{#1}%
6004 }
6005 \define@key{Field}{align}{%
6006   \def\Fld@align{#1}%
6007 }
6008 \define@key{Field}{value}{%
6009   \Hy@pdfstringdef\Fld@value{#1}%
6010 }
6011 \define@key{Field}{checkboxsymbol}{%
6012   \Fld@DingDef\Fld@cbsymbol{#1}%
6013 }
6014 \define@key{Field}{radiosymbol}{%
6015   \Fld@DingDef\Fld@radiosymbol{#1}%
6016 }
6017 \def\Fld@DingDef#1#2{%
6018   \let\Fld@temp\ltx@empty
6019   \Fld@@@DingDef#2\ding{ }\@nil
6020   \let#1\Fld@temp
6021 }
6022 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6023   \expandafter\def\expandafter\Fld@temp\expandafter{%
6024     \Fld@temp
6025     #1%
6026   }%
6027   \ifx\\#3\\%
6028     \expandafter\@gobble
6029   \else
6030     \begingroup
6031     \lccode`0=#2\relax
6032     \lowercase{\endgroup
6033       \expandafter\def\expandafter\Fld@temp\expandafter{%
6034         \Fld@temp
6035         0%
6036       }%
6037     }%
6038     \expandafter\@firstofone
6039   \fi
6040   {%
6041     \Fld@@@DingDef#3\@nil
6042   }%
6043 }

6044 \define@key{Field}{rotation}{%
6045   \def\Fld@rotation{#1}%
6046 }

6047 \define@key{Field}{backgroundcolor}{%
6048   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6049 }
6050 \define@key{Field}{bordercolor}{%
6051   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6052 }
6053 \define@key{Field}{color}{%

```

```

6054 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6055 }

6056 \let\Fld@onclick@code\ltx@empty
6057 \let\Fld@format@code\ltx@empty
6058 \let\Fld@validate@code\ltx@empty
6059 \let\Fld@calculate@code\ltx@empty
6060 \let\Fld@keystroke@code\ltx@empty
6061 \let\Fld@onfocus@code\ltx@empty
6062 \let\Fld@onblur@code\ltx@empty
6063 \let\Fld@onmousedown@code\ltx@empty
6064 \let\Fld@onmouseup@code\ltx@empty
6065 \let\Fld@onenter@code\ltx@empty
6066 \let\Fld@onexit@code\ltx@empty
6067 \def\Hy@temp#1{%
6068   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6069 }
6070 \def\Hy@@temp#1#2{%
6071   \ifHy@pdfa
6072     \define@key{Field}{#2}{%
6073       \Hy@Error{%
6074         PDF/A: Additional action `#2' is prohibited%
6075       }\@ehc
6076     }%
6077   \else
6078     \define@key{Field}{#2}{%
6079       \def#1{##1}%
6080     }%
6081   \fi
6082 }
6083 \Hy@temp{keystroke}
6084 \Hy@temp{format}
6085 \Hy@temp{validate}
6086 \Hy@temp{calculate}
6087 \Hy@temp{onfocus}
6088 \Hy@temp{onblur}
6089 \Hy@temp{onenter}
6090 \Hy@temp{onexit}

6091 \let\Fld@calculate@sortkey\ltx@empty
6092 \define@key{Field}{calculatesortkey}[1]{%
6093   \def\Fld@calculate@sortkey{#1}%
6094 }

6095 \ifHy@texht
6096   \def\Hy@temp#1{%
6097     \define@key{Field}{#1}{%
6098       \Field@addtoks{#1}{##1}%
6099     }%
6100   }%
6101 \else
6102   \def\Hy@temp#1{%
6103     \define@key{Field}{#1}{%
6104       \Hy@WarnHTMLFieldOption{#1}%
6105     }%
6106   }%

```

```

6107 \fi
6108 \Hy@temp{ondblclick}
6109 \Hy@temp{onmousedown}
6110 \Hy@temp{onmouseup}
6111 \Hy@temp{onmouseover}
6112 \Hy@temp{onmousemove}
6113 \Hy@temp{onmouseout}
6114 \Hy@temp{onkeydown}
6115 \Hy@temp{onkeyup}
6116 \Hy@temp{onselect}
6117 \Hy@temp{onchange}
6118 \Hy@temp{onkeypress}
6119 \ifHy@texht
6120   \define@key{Field}{onclick}{%
6121     \Field@addtoks{onclick}{#1}%
6122   }%
6123 \else
6124   \ifHy@pdfa
6125     \define@key{Field}{onclick}{%
6126       \Hy@Error{%
6127         PDF/A: Action `onclick' is prohibited%
6128       } \@ehc
6129     }%
6130   \else
6131     \define@key{Field}{onclick}{%
6132       \def\Fld@onclick@code{#1}%
6133     }%
6134   \fi
6135 \fi

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

```



```

6161 \else
6162   #1 #2%
6163 \fi
6164 }
6165 \def\LayoutChoiceField#1#2{% label, field
6166   \def\Hy@temp{#1}%
6167   \ifx\Hy@temp\@empty
6168     #2%
6169   \else
6170     #1 #2%
6171   \fi
6172 }
6173 \def\LayoutCheckField#1#2{% label, field
6174   \def\Hy@temp{#1}%
6175   \ifx\Hy@temp\@empty
6176     #2%
6177   \else
6178     #1 #2%
6179   \fi
6180 }
6181 \def\LayoutPushButtonField#1{% button
6182   #1%
6183 }
6184 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6185 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6186 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6187 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6188 \def\MakeButtonField#1{%
6189   \sbox0{%
6190     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6191   }%
6192   \@tempdima\ht0 %
6193   \advance\@tempdima by \Fld@borderwidth bp %
6194   \advance\@tempdima by \Fld@borderwidth bp %
6195   \ht0\@tempdima
6196   \@tempdima\dp0 %
6197   \advance\@tempdima by \Fld@borderwidth bp %
6198   \advance\@tempdima by \Fld@borderwidth bp %
6199   \dp0\@tempdima
6200   \box0\relax
6201 }
6202 \def\DefaultHeightofSubmit{14pt}
6203 \def\DefaultWidthofSubmit{2cm}
6204 \def\DefaultHeightofReset{14pt}
6205 \def\DefaultWidthofReset{2cm}
6206 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6207 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6208 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6209 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6210 \def\DefaultHeightofText{\normalbaselineskip}
6211 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6212 \def\DefaultWidthofText{3cm}
6213 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6214 \def\DefaultOptionsofReset{print,name=Reset,noexport}

```

```

6215 \def\DefaultOptionsofPushButton{print}
6216 \def\DefaultOptionsofCheckBox{print}
6217 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6218 \def\DefaultOptionsofListBox{print}
6219 \def\DefaultOptionsofComboBox{print,edit,sort}
6220 \def\DefaultOptionsofPopdownBox{print}
6221 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

6222 \ifHy@hyperfigures
6223 \Hy@Info{Hyper figures ON}%
6224 \else
6225 \Hy@Info{Hyper figures OFF}%
6226 \fi
6227 \ifHy@nesting
6228 \Hy@Info{Link nesting ON}%
6229 \else
6230 \Hy@Info{Link nesting OFF}%
6231 \fi
6232 \ifHy@hyperindex
6233 \Hy@Info{Hyper index ON}%
6234 \else
6235 \Hy@Info{Hyper index OFF}%
6236 \fi
6237 \ifHy@backref
6238 \Hy@Info{backreferencing ON}%
6239 \else
6240 \Hy@Info{backreferencing OFF}%
6241 \fi
6242 \ifHy@colorlinks
6243 \Hy@Info{Link coloring ON}%
6244 \else
6245 \Hy@Info{Link coloring OFF}%
6246 \fi
6247 \ifHy@ocgcolorlinks
6248 \Hy@Info{Link coloring with OCG ON}%
6249 \else
6250 \Hy@Info{Link coloring with OCG OFF}%
6251 \fi
6252 \ifHy@pdfa
6253 \Hy@Info{PDF/A mode ON}%
6254 \else
6255 \Hy@Info{PDF/A mode OFF}%
6256 \fi

```

21 Low-level utility macros

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

```

6257 \edef\hyper@hash{\string#}

```

```

6258 \edef\hyper@tilde{\string~}
6259 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6260 \def\@currentHref{Doc-Start}
6261 \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.

```

6262 \Hy@AtBeginDocument{%
6263   \Hy@pdfstringtrue
6264   \PDF@SetupDoc
6265   \let\PDF@SetupDoc\@empty
6266   \Hy@DisableOption{pdfpagescrop}%
6267   \Hy@DisableOption{pdfpagemode}%
6268   \Hy@DisableOption{pdfnonfullscreenpagemode}%
6269   \Hy@DisableOption{pdfdirection}%
6270   \Hy@DisableOption{pdfviewarea}%
6271   \Hy@DisableOption{pdfviewclip}%
6272   \Hy@DisableOption{pdfprintarea}%
6273   \Hy@DisableOption{pdfprintclip}%
6274   \Hy@DisableOption{pdfprintscaling}%
6275   \Hy@DisableOption{pdfduplex}%
6276   \Hy@DisableOption{pdfpicktraybypdfsize}%
6277   \Hy@DisableOption{pdfprintpagerange}%
6278   \Hy@DisableOption{pdfnumcopies}%
6279   \Hy@DisableOption{pdfstartview}%
6280   \Hy@DisableOption{pdfstartpage}%
6281   \Hy@DisableOption{pdftoolbar}%
6282   \Hy@DisableOption{pdfmenubar}%
6283   \Hy@DisableOption{pdfwindowui}%
6284   \Hy@DisableOption{pdffitwindow}%
6285   \Hy@DisableOption{pdfcenterwindow}%
6286   \Hy@DisableOption{pdfdisplaydoctitle}%
6287   \Hy@DisableOption{pdfpagelayout}%
6288   \Hy@DisableOption{pdflang}%
6289   \Hy@DisableOption{baseurl}%
6290   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6291   \Hy@pdfstringfalse
6292 }

```

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

```

6293 \@ifundefined{@kernel@ref}
6294 {\LetLtxMacro\NoHy@OrgRef\ref
6295  \DeclareRobustCommand*\ref{%
6296   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6297  }
6298  \LetLtxMacro\NoHy@OrgPageRef\pageref
6299  \DeclareRobustCommand*\pageref{%
6300   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6301  }}{}

```

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.

```
6302 \def\NoHyper{%
6303   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6304   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6305   \global\let\hyper@livelink\hyper@link
6306   \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6307   \let\hyper@anchor\ltx@gobble
6308   \let\hyper@anchorstart\ltx@gobble
6309   \def\hyper@anchorend{\Hy@xspace@end}%
6310   \let\hyper@linkstart\ltx@gobbletwo
6311   \def\hyper@linkend{\Hy@xspace@end}%
6312   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6313   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6314   \let\Hy@backout\@gobble
6315 }
6316 \def\stop@hyper{%
6317   \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6318   \let\Hy@backout\@gobble
6319   \let\hyper@@anchor\ltx@gobble
6320   \def\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 }
6329 \def\endNoHyper{%
6330   \global\let\hyper@link\hyper@livelink
6331 }
6332 \end{package}
```

23 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package `nohyperref` is a dummy package that defines some low level and some top-level commands. It is done for `jadetex`, which calls `hyperref` low-level commands, but it would also be useful with people using normal `hyperref`, who really do not want the package loaded at all.

Some low-level commands:

```
6333 \*nohyperref
6334 \RequirePackage{letltxmacro}[2008/06/13]
6335 \let\hyper@@anchor\@gobble
6336 \def\hyper@link##1##2##3{##3}%
6337 \let\hyper@anchorstart\@gobble
6338 \let\hyper@anchorend\@empty
```

```

6339 \let\hyper@linkstart\@gobbletwo
6340 \let\hyper@linkend\@empty
6341 \def\hyper@linkurl#1#2{#1}%
6342 \def\hyper@linkfile#1#2#3{#1}%
6343 \def\hyper@link@[#1]#2#3{#1}%
6344 \let\PDF@SetupDoc\@empty
6345 \let\PDF@FinishDoc\@empty
6346 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6347 \def\Acrobatmenu#1#2{\leavevmode#2}
6348 \let\pdfstringdefDisableCommands\@gobbletwo
6349 \let\texorpdfstring\@firstoftwo
6350 \let\pdfbookmark\@undefined
6351 \newcommand\pdfbookmark[3]{}{}
6352 \let\phantomsection\@empty
6353 \let\hypersetup\@gobble
6354 \let\hyperbaseurl\@gobble
6355 \newcommand*{\href}[3]{}{#3}
6356 \let\hyperdef\@gobbletwo
6357 \let\hyperlink\@gobble
6358 \let\hypertarget\@gobble
6359 \def\hyperref{%
6360   \@ifnextchar{\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6361 }
6362 \long\def\@gobbleopt[#1]{}
6363 \let\hyperpage\@empty

```

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

```

6364 \@if@t@r\fmtversion{2022-06-01}
6365 {}%
6366 {%
6367   \LetLtxMacro\NoHy@OrgRef\ref
6368   \DeclareRobustCommand*{\ref}{%
6369     \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6370   }
6371   \LetLtxMacro\NoHy@OrgPageRef\pageref
6372   \DeclareRobustCommand*{\pageref}{%
6373     \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6374   }%
6375 }
6376 \</nohyperref>

```

24 The Mangling Of Aux and Toc Files

Some extra tests so that the hyperref package may be removed or added to a document without having to remove .aux and .toc files (this section is by David Carlisle) All the code is delayed to `\begin{document}` change 2023-08-13: with a new format it is no longer needed to handle different `\newlabel` definitions. The code can be removed completely later.

```

6377 (*package)
6378 \@if@t@r\fmtversion{2023-06-01}{}
6379 {

```

```
6380 \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.

```
6381 \if@filesw
6382 \immediate\write\@auxout{%
6383 \string\providecommand\string\HyperFirstAtBeginDocument{%
6384 \string\AtBeginDocument}^^J%
6385 \string\HyperFirstAtBeginDocument{%
6386 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6387 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6388 \string\gdef\string\newlabel\string#1\string#2{%
6389 \string\newlabelxx{\string#1}\string#2}^^J%
6390 \string\gdef\string\newlabelxx%
6391 \string#1\string#2\string#3\string#4\string#5\string#6{%
6392 \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.

```
6393 \string\AtEndDocument{%
6394 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6395 \string\let\string\newlabel\string\oldnewlabel^^J%
6396 \string\fi%
6397 }^^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.

```
6398 \string\fi%
6399 }^^J%
6400 \string\global\string\let\string\hyper@last\relax^^J%
6401 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6402 }%
6403 \fi
6404 \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.

```
6405 \ifx\hyper@last\@undefined
6406 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
6407 \fi
6408 }
6409 }
```

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`.

```
6410 \ifHy@pdfusetitle
```

```

6411 \let\HyOrg@title\title
6412 \let\HyOrg@author\author
6413 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6414 \def\Hy@scanopttitle[#1]{%
6415   \gdef\Hy@title{#1}%
6416   \HyOrg@title[{#1}]%
6417 }%
6418 \def\Hy@scantitle#1{%
6419   \gdef\Hy@title{#1}%
6420   \HyOrg@title{#1}%
6421 }%
6422 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6423 \def\Hy@scanoptauthor[#1]{%
6424   \gdef\Hy@author{#1}%
6425   \HyOrg@author[{#1}]%
6426 }%
6427 \def\Hy@scanauthor#1{%
6428   \gdef\Hy@author{#1}%
6429   \HyOrg@author{#1}%
6430 }%

```

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.

```

6431 \begingroup
6432   \def\process@me#1\@nil#2{%
6433     \expandafter\let\expandafter\x\csname @#2\endcsname
6434     \edef\y{\expandafter\strip@prefix\meaning\x}%
6435     \def\c##1#1##2\@nil{%
6436       \ifx\\##1\\%
6437         \else
6438           \expandafter\gdef\csname Hy@#2\endcsname
6439             \expandafter{\x}%
6440         \fi
6441       }%
6442     \expandafter\c\y\relax#1\@nil
6443   }%
6444   \expandafter\process@me\string\@latex@\@nil{title}%
6445   \expandafter\process@me\string\@latex@\@nil{author}%
6446 \endgroup
6447 \fi
6448 \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.

```

6449 \def\Hy@UseMaketitleString#1{%

```

```

6450 \ltx@ifundefined{Hy@#1}{-}{%
6451   \begingroup
6452   \let\Hy@saved@hook\pdfstringdefPreHook
6453   \pdfstringdefDisableCommands{%
6454     \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6455     \let\newline\\%
6456     \def\and{; }%
6457     \let\thanks\@gobble%
6458   }%
6459   \expandafter\ifx\csname @pdf#1\endcsname\@empty
6460     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6461       \csname Hy@#1\endcsname\@empty
6462     }%
6463   \fi
6464   \global\let\pdfstringdefPreHook\Hy@saved@hook
6465 \endgroup
6466 }%
6467 }
6468 \def\Hy@newline@title#1{ #1}
6469 \def\Hy@newline@author#1{, #1}
6470 \def\Hy@UseMaketitleInfos{%
6471   \Hy@UseMaketitleString{title}%
6472   \Hy@UseMaketitleString{author}%
6473 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

6474 \RequirePackage{atbegshi}[2007/09/09]
6475 \let\Hy@EveryPageHook\ltx@empty
6476 \let\Hy@EveryPageBoxHook\ltx@empty
6477 \let\Hy@FirstPageHook\ltx@empty
6478 \AtBeginShipout{%
6479   \Hy@EveryPageHook
6480   \ifx\Hy@EveryPageBoxHook\ltx@empty
6481   \else
6482     \setbox\AtBeginShipoutBox=\vbox{%
6483       \offinterlineskip
6484       \Hy@EveryPageBoxHook
6485       \box\AtBeginShipoutBox
6486     }%
6487   \fi
6488 }
6489 \ltx@iffileloaded{hpdfetex.def}{%
6490   \AtBeginShipout{%
6491     \Hy@FirstPageHook
6492     \global\let\Hy@FirstPageHook\ltx@empty
6493   }%
6494 }{%

```



```

6495 \AtBeginShipoutFirst{%
6496   \Hy@FirstPageHook
6497 }%
6498 }
6499 \g@addto@macro\Hy@FirstPageHook{%
6500   \PDF@FinishDoc
6501   \global\let\PDF@FinishDoc\ltx@empty
6502 }

```

27.1 PDF /PageLabels

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

```

6503 \ifHy@pdfpagelabels
6504   \begingroup\expandafter\expandafter\expandafter\endgroup
6505   \expandafter\ifx\csname thepage\endcsname\relax
6506     \Hy@pdfpagelabelsfalse
6507     \Hy@WarningNoLine{%
6508       Option 'pdfpagelabels' is turned off\MessageBreak
6509       because \string\thepage\space is undefined%
6510     }%
6511     \csname fi\endcsname
6512     \csname iffalse\expandafter\endcsname
6513     \fi

```

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

```

6514 \def\thispdfpagelabel#1{%
6515   \gdef\HyPL@thisLabel{#1}%
6516 }%
6517 \global\let\HyPL@thisLabel\relax

```

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

```

6518 \let\HyPL@Labels\ltx@empty

```

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

```

6519 \newcount\Hy@abspage
6520 \Hy@abspage=0 %

```

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

```

6521 \def\HyPL@LastType{init}%
6522 \def\HyPL@LastNumber{0}%
6523 \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the \LaTeX pendants.

```

6524 \def\HyPL@arabic{D}%
6525 \def\HyPL@Roman{R}%
6526 \def\HyPL@roman{r}%
6527 \def\HyPL@Alph{A}%
6528 \def\HyPL@alph{a}%
6529 \let\HyPL@SlidesSetPage\ltx@empty
6530 \ltx@ifclassloaded{slides}{%
6531   \def\HyPL@SlidesSetPage{%

```

```

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

```

`\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.

```

6547 \def\HyPL@EveryPage{%
6548 \begingroup
6549 \ifx\HyPL@thisLabel\relax
6550 \let\HyPL@page\thepage
6551 \HyPL@SlidesSetPage
6552 \else
6553 \let\HyPL@page\HyPL@thisLabel
6554 \global\let\HyPL@thisLabel\relax
6555 \fi
6556 \let\HyPL@Type\relax
6557 \ifnum\c@page>0 %
6558 \ifx\HyPL@SlidesSetPage\ltx@empty
6559 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6560 \fi
6561 \fi
6562 \let\Hy@temp Y%
6563 \ifx\HyPL@Type\HyPL@LastType
6564 \else
6565 \let\Hy@temp N%
6566 \fi
6567 \ifx\HyPL@Type\relax
6568 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6569 \else
6570 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6571 \fi
6572 \ifx\HyPL@Prefix\HyPL@LastPrefix
6573 \else
6574 \let\Hy@temp N%
6575 \fi
6576 \if Y\Hy@temp
6577 \advance\c@page by -1 %
6578 \ifnum\HyPL@LastNumber=\the\c@page\relax
6579 \else
6580 \let\Hy@temp N%
6581 \fi
6582 \Hy@StepCount\c@page

```

```

6583 \fi
6584 \if N\Hy@temp
6585 \ifx\HyPL@Type\relax
6586 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6587 \else
6588 \HyPL@StorePageLabel{%
6589 \ifx\HyPL@Prefix\@empty
6590 \else
6591 /P(\HyPL@Prefix)%
6592 \fi
6593 /S/\csname HyPL\HyPL@Type\endcsname
6594 \ifnum\the\c@page=1 %
6595 \else
6596 \space/St \the\c@page
6597 \fi
6598 }%
6599 \fi
6600 \fi
6601 \xdef\HyPL@LastNumber{\the\c@page}%
6602 \global\let\HyPL@LastType\HyPL@Type
6603 \global\let\HyPL@LastPrefix\HyPL@Prefix
6604 \endgroup
6605 \Hy@GlobalStepCount\Hy@abspage
6606 }%

```

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

```

6607 \def\HyPL@CheckThePage#1\@nil{%
6608 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6609 }%

```

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

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

```

6610 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6611 \def\Hy@tempa{#4}%
6612 \def\Hy@tempb{\csname\endcsname\c@page}%
6613 \ifx\Hy@tempa\Hy@tempb
6614 \expandafter\ifx\csname HyPL#3\endcsname\relax
6615 \else
6616 \def\HyPL@Type{#3}%
6617 \def\HyPL@Prefix{#2}%
6618 \fi
6619 \else
6620 \begingroup
6621 \let\Hy@next\endgroup
6622 \let\HyPL@found\@undefined
6623 \def\arabic{\HyPL@Format{arabic}}%
6624 \def\Roman{\HyPL@Format{Roman}}%
6625 \def\roman{\HyPL@Format{roman}}%
6626 \def\Alph{\HyPL@Format{Alph}}%
6627 \def\alph{\HyPL@Format{alph}}%
6628 \protected@edef\Hy@temp{#1}%
6629 \ifx\HyPL@found\relax

```

```

6630      \toks@\expandafter{\Hy@temp}%
6631      \edef\Hy@next{\endgroup
6632      \noexpand\HyPL@@@CheckThePage\the\toks@
6633      \noexpand\HyPL@found\relax\noexpand\@nil
6634      }%
6635      \fi
6636      \Hy@next
6637      \fi
6638      }%

```

\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**.

```

6639      \def\HyPL@Format#1#2{%
6640      \ifx\HyPL@found\@undefined
6641      \expandafter\ifx\csname c@#2\endcsname\c@page
6642      \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6643      \else
6644      \expandafter\noexpand\csname#1\endcsname{#2}%
6645      \fi
6646      \else
6647      \expandafter\noexpand\csname#1\endcsname{#2}%
6648      \fi
6649      }%

```

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

```

6650      \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6651      \def\Hy@tempa{#3}%
6652      \def\Hy@tempb{\HyPL@found\relax}%
6653      \ifx\Hy@tempa\Hy@tempb
6654      \def\HyPL@Type{#2}%
6655      \def\HyPL@Prefix{#1}%
6656      \fi
6657      }%

```

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

```

6658      \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**.

```

6659      \def\HyPL@Useless{0<</S/D>>}%
6660      \@onelevel@sanitize\HyPL@Useless

```

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

```

6661      \def\HyPL@SetPageLabels{%
6662      \@onelevel@sanitize\HyPL@Labels
6663      \ifx\HyPL@Labels\@empty
6664      \else
6665      \ifx\HyPL@Labels\HyPL@Useless
6666      \else

```

```

6667     \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
6668     \fi
6669   \fi
6670 }%

6671 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6672 \fi

Option ‘pdfpagelabels’ has been used and is now disabled.
6673 \Hy@DisableOption{pdfpagelabels}
6674 \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
6675 (*pdfTeX)
6676 \pdf@ifdraftmode{%
6677   \let\Hy@PutCatalog\ltx@gobble
6678 }{%
6679   \let\Hy@PutCatalog\pdfcatalog
6680 }
6681 \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.

```

6682 (*vTeX)
6683 \providecommand*\XR@ext}{pdf}
6684 \edef\Hy@VTeXversion{%
6685   \ifx\VTeXversion\@undefined
6686     \z@
6687   \else
6688     \ifx\VTeXversion\relax
6689       \z@
6690     \else
6691       \VTeXversion
6692     \fi
6693   \fi
6694 }
6695 \begingroup
6696   \ifnum\Hy@VTeXversion<660 %
6697     \gdef\Hy@PutCatalog#1{%
6698       \Hy@WarningNoLine{%
6699         VTeX 6.59g or above required for pdfpagelabels%
6700       }%
6701     }%
6702   \else
6703     \gdef\Hy@PutCatalog#1{%
6704       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil

```

```

6705 }%
6706 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6707   \ifx\#2\%
6708     \else
6709       \immediate\special{!pdfpagelabels #2}%
6710     \fi
6711 }%
6712 \fi
6713 \endgroup
6714 \</vtex>

6715 \<pdfTeX | vtex>

```

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

```

6716 \ifHy@pdfpagelabels
6717   \def\HyPL@StorePageLabel#1{%
6718     \toks@{\expandafter{\HyPL@Labels}}%
6719     \xdef\HyPL@Labels{%
6720       \the\toks@
6721       \the\Hy@abspage<<#1>>%
6722     }%
6723 }%

```

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.

```

6724 \RequirePackage{atveryend}[2009/12/07]%
6725 \AtVeryEndDocument{%
6726   \HyPL@SetPageLabels
6727 }%

6728 \fi
6729 \</pdfTeX | vtex>

```

27.1.2 xetex

```

6730 \<*xetex>
6731 \HyPsd@LoadUnicode
6732 \Hy@unicodetrue
6733 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6734 \else
6735   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6736 \fi
6737 \HyPsd@LoadStringEncoding
6738 \define@key{Hyp}{unicode}[true]{%
6739   \Hy@boolkey{unicode}{#1}%
6740   \ifHy@unicode
6741     \else
6742       \Hy@Warning{%
6743         XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6744         option setting `unicode=false'%
6745       }%
6746       \Hy@unicodetrue
6747     \fi
6748 }

```

```

6749 \define@key{Hyp}{pdfencoding}{%
6750   \edef\HyPsd@temp{#1}%
6751   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6752     \let\HyPsd@pdfencoding\HyPsd@temp
6753   \else
6754     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6755       \let\HyPsd@pdfencoding\HyPsd@temp
6756     \else
6757       \Hy@Warning{%
6758         XeTeX driver only supports\MessageBreak
6759         `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6760         setting `pdfencoding=\HyPsd@temp'%
6761       }%
6762     \fi
6763   \fi
6764 }
6765 \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:

```

6766 \def\setpdfinkmargin#1{%
6767   \begingroup
6768   \setlength{\dimen@}{#1}%
6769   \special{dvipdfmx:config g \strip@pt\dimen@}%
6770 \endgroup}
6771 \</xetex>

```

set the pdf version

```

6772 \<*dvipdfm | xetex>
6773 \special{pdf:majorversion \Hy@pdf@majorversion}
6774 \special{pdf:minorversion \Hy@pdf@minorversion}
6775 \</dvipdfm | xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

6776 \<*pdfmarkbase>
6777 \begingroup
6778 \<@ifundefined{headerps@out}{}{}%
6779 \toks@\expandafter{\Hy@FirstPageHook}%
6780 \xdef\Hy@FirstPageHook{%
6781   \noexpand\headerps@out{%
6782     systemdict /pdfmark known%
6783     {%
6784       userdict /?pdfmark systemdict /exec get put%
6785     }{%
6786       userdict /?pdfmark systemdict /pop get put %
6787       userdict /pdfmark systemdict /cleartomark get put%
6788     }%
6789   }%
6790   \the\toks@
6791 }%
6792 }%
6793 }%
6794 \endgroup
6795 \</pdfmarkbase>

```

\Hy@PutCatalog

```
6796 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfmark{docview <<#1>>}}
6797 <*pdfmarkbase>
6798 \def\Hy@PutCatalog#1{%
6799   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6800 }
6801 </pdfmarkbase>

6802 <*pdfmarkbase | dvipdfm | xetex>
6803 \ifHy@pdfpagelabels
```

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

```
6804 \def\HyPL@StorePageLabel#1{%
6805   \if@filesw
6806     \begingroup
6807     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6808     \immediate\write\@mainaux{%
6809       \string\HyPL@Entry{\Hy@tempa}%
6810     }%
6811     \endgroup
6812   \fi
6813 }%
```

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.

```
6814 \Hy@AtBeginDocument{%
6815   \if@filesw
6816     \immediate\write\@mainaux{%
6817       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6818     }%
6819   \fi
6820   \ifx\HyPL@Labels\@empty
6821     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6822   \else
6823     \HyPL@SetPageLabels
6824   \fi
6825   \let\HyPL@Entry\@gobble
6826 }%
```

\HyPL@Entry

```
6827 \def\HyPL@Entry#1{%
6828   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6829     \HyPL@Labels
6830     #1%
6831   }%
6832 }%

6833 \fi
6834 </pdfmarkbase | dvipdfm | xetex>
6835 <*packageEnd>

6836 \ifx\MaybeStopEarly\relax
6837 \else
```



```

6838 \Hy@stoppeearlytrue
6839 \expandafter\MaybeStopEarly
6840 \fi
6841 \Hy@stoppeearlyfalse

```

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

```

6842 \def\Hy@CounterExists#1{%
6843   \begingroup\expandafter\expandafter\expandafter\endgroup
6844   \expandafter\ifx\csname c@#1\endcsname\relax
6845     \expandafter\@gobble
6846   \else
6847     \begingroup\expandafter\expandafter\expandafter\endgroup
6848     \expandafter\ifx\csname the#1\endcsname\relax
6849       \expandafter\expandafter\expandafter\@gobble
6850     \else
6851       \expandafter\expandafter\expandafter\@firstofone
6852     \fi
6853   \fi
6854 }
6855 \Hy@CounterExists{section}{%
6856   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
6857 }
6858 \providecommand\theHequation{\arabic{equation}}}%
6859 \Hy@CounterExists{part}{%
6860   \providecommand\theHpart{\arabic{part}}}%
6861 }
6862 \ltx@ifundefined{thechapter}{%
6863   \providecommand\theHsection  {\arabic{section}}}%
6864   \providecommand\theHfigure   {\arabic{figure}}}%
6865   \providecommand\theHtable    {\arabic{table}}}%
6866 }{%
6867   \providecommand\theHchapter  {\arabic{chapter}}}%

```

```

6868 \providecommand\theHfigure    {\theHchapter.\arabic{figure}}%
6869 \providecommand\theHtable     {\theHchapter.\arabic{table}}%
6870 \providecommand\theHsection    {\theHchapter.\arabic{section}}%
6871 }
6872 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6873 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6874 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
6875 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6876 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
6877 \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.

```

6878 \let\H@item\item
6879 \newcounter{Item}
6880 \def\theHItem{\arabic{Item}}
6881 \def\item{%
6882   \@hyper@itemfalse
6883   \if@nmbrrlist\@hyper@itemtrue\fi
6884   \H@item
6885 }
6886 \providecommand\theHenumi    {\theHItem}
6887 \providecommand\theHenumii   {\theHItem}
6888 \providecommand\theHenumiii  {\theHItem}
6889 \providecommand\theHenumiv   {\theHItem}
6890 \providecommand\theHHfootnote {\arabic{Hfootnote}}
6891 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6892 \@ifundefined{theHHmpfootnote}{%
6893   \let\theHHmpfootnote\theHHfootnote
6894 }{}

```

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.

```

6895 \let\H@refstepcounter\refstepcounter
6896 \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`

```

6897 \newif\if@hyper@item
6898 \newif\if@skiphyperref
6899 \@hyper@itemfalse
6900 \@skiphyperreffalse
6901 \ExplSyntaxOn
6902 \def\refstepcounter#1{%
6903   \legacy_if:nF {Hy@pdfstring}
6904   {
6905     \H@refstepcounter{#1}%
6906     \bool_lazy_and:nnT
6907       { \l__hyp_target_create_bool }

```

```

6908 { ! \legacy_if_p:n{@skiphyperref} }
6909 {
6910   \legacy_if:nTF {@hyper@item}
6911   {
6912     \stepcounter{Item}%
6913     \hyper@refstepcounter{Item}%
6914     \@hyper@itemfalse
6915   }
6916   {
6917     \hyper@refstepcounter{#1}%
6918   }
6919 }
6920 }
6921 }
6922 \ExplSyntaxOff
6923 \let\Hy@saved@refstepcounter\refstepcounter

```

AMSTeX processes all equations twice; we want to make sure that the hyper stuff is not executed twice, so we use the AMS `\ifmeasuring@`, initialized if AMS math is not used.

```

6924 \newif\ifmeasuring@\measuring@false
6925 \newcommand\Hy@ifnotmeasuring[1]{#1}
6926 \AddToHook{package/amsmath/after}
6927 {
6928   \renewcommand\Hy@ifnotmeasuring[1]
6929   {\ifmeasuring@ \else #1\fi}
6930 }

```

`\hyper@refstepcounter`

```

6931 \def\hyper@refstepcounter#1{%
6932   \HyCnt@ProvideTheHCounter{#1}%
6933   \hyper@makecurrent{#1}%
6934   \Hy@ifnotmeasuring
6935   {\Hy@raisedlink{%
6936     \hyper@anchorstart{\@currentHref}\hyper@anchorend
6937   }}%
6938 }

```

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

```

6939 \def\HyCnt@ProvideTheHCounter#1{%
6940   \@ifundefined{theH#1}{%
6941     \expandafter\def\csname theH#1\endcsname{}%
6942     \def\Hy@temp{\@elt{#1}}%
6943     \ltx@onelevel@sanitize\Hy@temp
6944     \let\HyOrg@elt\@elt
6945     \edef\@elt{%
6946       \noexpand\HyCnt@LookForParentCounter

```

```

6947 \expandafter\noexpand\csname theH#1\endcsname
6948 }%
6949 \cl@ckpt
6950 \let\@elt\HyOrg@elt
6951 \expandafter
6952 \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
6953 \expandafter{%
6954 \expandafter\@arabic\csname c@#1\endcsname
6955 }%
6956 }{}%
6957 }

```

\Hy@LookForParentCounter

```

6958 \def\HyCnt@LookForParentCounter#1#2{%
6959 \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
6960 \ltx@ifundefined{cl@#2}{%
6961 }{%
6962 \ltx@onelevel@sanitize\Hy@temp@A
6963 \edef\Hy@temp@A{%
6964 \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
6965 }\Hy@temp@A
6966 \ifin@
6967 \ltx@ifundefined{theH#2}{%
6968 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6969 \expandafter{%
6970 \expandafter\@arabic\csname c@#2\endcsname.%
6971 }%
6972 }{}%
6973 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
6974 \expandafter{%
6975 \csname theH#2\endcsname.%
6976 }%
6977 }%
6978 \fi
6979 }%
6980 }

```

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`.

```

6981 \begingroup\expandafter\expandafter\expandafter\endgroup
6982 \expandafter\ifx\csname chapter\endcsname\relax
6983 \def\Hy@chapterstring{section}%
6984 \else
6985 \def\Hy@chapterstring{chapter}%
6986 \fi
6987 \def\Hy@appendixstring{appendix}
6988 \def\Hy@chapapp{\Hy@chapterstring}
6989 \ltx@ifundefined{appendix}{%
6990 }{%
6991 \let\HyOrg@appendix\appendix

```

```

6992 \def\Hy@AlphNoErr#1{%
6993   \ifnum\value{#1}>26 %
6994     Alph\number\value{#1}%
6995   \else
6996     \ifnum\value{#1}<1 %
6997       Alph\number\value{#1}%
6998     \else
6999       \Alph{#1}%
7000     \fi
7001   \fi
7002 }%
7003 \def\appendix{%
7004   \ltx@ifundefined{chapter}{%
7005     \gdef\theHsection{\Hy@AlphNoErr{section}}%
7006   }{%
7007     \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7008   }%
7009   \xdef\Hy@chapapp{\Hy@appendixstring}%
7010   \HyOrg@appendix
7011 }%
7012 }

```

\Hy@Test@alph

```

7013 \def\Hy@Test@alph#1{%
7014   \ifcase#1\or
7015     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7016     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7017     u\or v\or w\or x\or y\or z%
7018   \else
7019     \@ctrerr
7020   \fi
7021 }

```

\Hy@Test@Alph

```

7022 \def\Hy@Test@Alph#1{%
7023   \ifcase#1\or
7024     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7025     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7026     U\or V\or W\or X\or Y\or Z%
7027   \else
7028     \@ctrerr
7029   \fi
7030 }

```

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

```

7031 \NewHook{__hyp/target/setname }
7032 \define@key{Hyp}{next-anchor}{%
7033   \AddToHookNext{__hyp/target/setname}%
7034   {\Hy@MakeCurrentHref{#1}}%
7035 }

```

\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.

```

7036 \def\hyper@makecurrent#1{%
7037   \begingroup
7038     \Hy@safe@activetrue
7039     \edef\Hy@param{#1}%
7040     \ifx\Hy@param\Hy@chapterstring
7041       \let\Hy@param\Hy@chapapp
7042     \fi
7043     \ifHy@hypertextnames
7044       \let\@number\@firstofone
7045       \def\@fnsymbol##1{fnsymbol\number##1}%
7046       \def\@arabic##1{\number##1}%
7047       \ifx\@alph\Hy@Test@alph
7048       \else
7049         \def\@alph{alph\number}%
7050       \fi
7051       \ifx\@Alph\Hy@Test@Alph
7052       \else
7053         \def\@Alph{Alph\number}%
7054       \fi
7055       \ifHy@naturalnames
7056         \let\textlatin\@firstofone
7057         \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7058       \else
7059         \xdef\HyperGlobalCurrentHref{%
7060           \csname
7061             the%
7062             \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7063             #1%
7064           \endcsname
7065         }%
7066       \fi
7067       \xdef\HyperGlobalCurrentHref{%
7068         \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7069       }%
7070     \else
7071       \Hy@GlobalStepCount\Hy@linkcounter
7072       \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7073     \fi
7074   \endgroup
7075   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7076   \ifHy@localanchorname
7077     \let\@currentHref\HyperLocalCurrentHref
7078   \else
7079     \global\let\@currentHref\HyperGlobalCurrentHref
7080   \fi
7081   \UseHook{__hyp/target/setname}%
7082 }

```

\Hy@MakeCurrentHref

```

7083 \def\Hy@MakeCurrentHref#1{%
7084   \edef\HyperLocalCurrentHref{#1}%
7085   \@onelevel@sanitize\HyperLocalCurrentHref
7086   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7087   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref

```

```

7088 \ifHy@localanchorname
7089 \let\@currentHref\HyperLocalCurrentHref
7090 \else
7091 \global\let\@currentHref\HyperGlobalCurrentHref
7092 \fi
7093 }

```

`\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.

```

7094 \def\Hy@MakeCurrentHrefAuto#1{%
7095 \Hy@GlobalStepCount\Hy@linkcounter
7096 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7097 \UseHook{__hyp/target/setname}}

```

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

```

7098 \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.

```

7099 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
7100 \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:

```

7101 \@ifpackageloaded{titlesec}{%
7102 \def\ttl@Hy@steplink#1{%
7103 \Hy@MakeCurrentHrefAuto{#1*}%
7104 \edef\ttl@Hy@saveanchor{%
7105 \noexpand\Hy@raisedlink{%
7106 \noexpand\hyper@anchorstart{\@currentHref}%
7107 \noexpand\hyper@anchorend
7108 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7109 \noexpand\ttl@Hy@PatchSaveWrite
7110 }%
7111 }%
7112 }%
7113 \def\ttl@Hy@PatchSaveWrite{%
7114 \begingroup
7115 \toks@\expandafter{\ttl@savewrite}%
7116 \edef\x{\endgroup
7117 \def\noexpand\ttl@savewrite{%
7118 \let\noexpand\@currentHref
7119 \noexpand\ttl@Hy@SavedCurrentHref
7120 \the\toks@
7121 }%

```

```

7122 }%
7123 \x
7124 }%
7125 \def\ttl@Hy@refstepcounter#1{%
7126 \let\ttl@b\Hy@raisedlink
7127 \def\Hy@raisedlink##1{%
7128 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7129 }%
7130 \refstepcounter{#1}%
7131 \let\Hy@raisedlink\ttl@b
7132 }%
7133 }{}

```

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.

```

7134 \@if@t@r\fmtversion{2021-11-15}
7135 {}%
7136 {
7137 \AtBeginDocument{%
7138 \def\Hy@varioref@undefined{{??}{??}{}}{}%
7139 \@ifpackageloaded{varioref}{%
7140 \def\vref@pagenum#1#2{%
7141 \@ifundefined{r@#2}{%
7142 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7143 }{}%
7144 \edef#1{\getpagerefnumber{#2}}%
7145 }%
7146 }{}
7147 }
7148 }

```

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

```

7149 \@ifpackageloaded{longtable}{%
7150 \@ifundefined{hyper@nopatch@longtable}{%
7151 \begingroup
7152 \def\y{\LT@array}%
7153 \@ifundefined{scr@LT@array}{%
7154 \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7155 }{\def\y{\scr@LT@array}}%
7156 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7157 \expandafter\endgroup
7158 \expandafter\def\y[##1]##2{%

```



```

7159 \H@refstepcounter{#1}%
7160 \hyper@makecurrent{table}%
7161 \let\Hy@LT@currentHref\@currentHref
7162 #2\@sharp####4%
7163 }%
7164 }%
7165 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
Patch of \LT@start: add anchor before first line after \vskip\LTpre
7166 \begingroup
7167 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7168 \endgroup
7169 \def\LT@start{%
7170 #1%
7171 \ifvoid\LT@foot#2\fi
7172 \let\@currentHref\Hy@LT@currentHref
7173 \Hy@raisedlink{%
7174 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7175 }%
7176 #3%
7177 }%
7178 }%
7179 \expandafter\x\LT@start\@nil
7180 }{}
7181 }{}

```

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

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

```

7182 \let\new@refstepcounter\refstepcounter
7183 \let\H@equation\equation
7184 \let\H@endequation\endequation
7185 \@ifundefined{hyper@nopatch@mathenv}{%

```

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

```

7186 \@ifpackageloaded{amsmath}{-}{%
7187 \def\equation{%
7188 \let\refstepcounter\H@refstepcounter
7189 \H@equation
7190 \hyper@makecurrent{equation}%

```

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

```

7191 \mathopen{%
7192 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%

```

```

7193 }%
7194 \let\refstepcounter\new@refstepcounter
7195 }%
7196 \def\endequation{%
7197   \ifx\Hy@raisedlink\ltx@empty
7198     \hyper@anchorend
7199   \else
7200     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7201   \fi
7202   \H@endequation
7203 }%
7204 }
7205 }{}

```

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.

```

7206 \newif\if@eqnstar
7207 \@eqnstarfalse
7208 \let\H@eqnarray\eqnarray
7209 \let\H@endeqnarray\endeqnarray
7210 \@ifundefined{hyper@nopatch@mathenv}{%
7211   \def\eqnarray{%
7212     \let\Hy@reserved@a\relax
7213     \def\@currentHref{}%
7214     \H@eqnarray
7215     \if@eqnstar
7216     \else
7217       \ifx\\\@currentHref\\%
7218       \else
7219         \hyper@makecurrent{equation}%
7220         \mathopen{%
7221           \Hy@raisedlink{%
7222             \hyper@anchorstart{\@currentHref}\hyper@anchorend
7223           }%
7224         }%
7225       \fi
7226     \fi
7227   }
7228   \def\endeqnarray{%
7229     \H@endeqnarray
7230   }
7231 }{}

```

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.

```

7232 \@namedef{eqnarray*}{%
7233   \protected\def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
7234 }
7235 \@namedef{endeqnarray*}{%
7236   \nonumber\endeqnarray\@eqnstarfalse

```

7237 }

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

```

7238 \ltx@ifundefined{subeqnarray}{-}{%
7239   \let\H@subeqnarray\subeqnarray
7240   \let\H@endsubeqnarray\endsubeqnarray
7241   \def\subeqnarray{%
7242     \let\Hy@reserved@a\relax
7243     \H@subeqnarray
7244     \hyper@makecurrent{equation}%
7245     \hyper@anchorstart{\@currentHref}{-}\hyper@anchorend
7246   }%
7247   \def\endsubeqnarray{%
7248     \H@endsubeqnarray
7249   }%
7250   \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7251 }
```

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

```

7252 \def\make@stripped@name#1{%
7253   \begingroup
7254     \escapechar\m@ne
7255     \global\let\newname\@empty
7256     \protected@edef\Hy@tempa{#1}%
7257     \edef\@tempb{%
7258       \noexpand\@tfor\noexpand\Hy@tempa:=%
7259       \expandafter\strip@prefix\meaning\Hy@tempa
7260     }%
7261     \@tempb\do{%
7262       \if{\Hy@tempa\else
7263         \if}\Hy@tempa\else
7264         \xdef\newname{\newname\Hy@tempa}%
7265       \fi
7266     }%
7267   }%
7268 \endgroup
7269 }
```

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

```

7270 \AddToHook{cmd/subequations/before}
7271 {%
7272   \stepcounter{equation}%
7273   \protected@edef\theHparentequation{\theHequation}%
7274   \addtocounter{equation}{-1}%
7275 }
7276
7277 \AddToHook{cmd/subequations/after}
7278 {%
7279   \def\theHequation{\theHparentequation\alph{equation}}%
7280   \ignorespaces
7281 }
```

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

```

7282 \newcommand\Hy@theorem@refstepcounter[1]
7283 {%
7284   \H@refstepcounter{#1}%
7285   \hyper@makecurrent{#1}%
7286   \global\let\Hy@dth@currentHref\@currentHref
7287   \AddToHookNext{cmd/item/before}
7288     {\AddToHookNext{para/begin}
7289       {\let\Hy@tempa\@currentHref
7290         \MakeLinkTarget*\Hy@dth@currentHref}%
7291       \global\let\@currentHref\Hy@tempa
7292     }%
7293   }%
7294 }
7295 \@ifundefined{hyper@nopatch@thm}{%
7296   \AtBeginDocument{%
7297     \@ifpackageloaded{cleveref}
7298       {\AddToHook{cmd/@thm/before}{\ifhmode\unskip\fi}}
7299     {%
7300       \ifpatchable\@thm{refstepcounter}
7301         {\patchcmd\@thm{refstepcounter}{\Hy@theorem@refstepcounter}{}{}}
7302       {}%
7303     }%

```

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.

```

7304 \@ifundefined{hyper@nopatch@footnote}{%
7305   \ifHy@hyperfootnotes
7306     \newcounter{Hfootnote}%
7307     \let\H@@footnotetext\@footnotetext
7308     \let\H@@footnotemark\@footnotemark
7309     \def\@xfootnotenext[#1]{%
7310       \begingroup
7311         \csname c@\@mpfn\endcsname #1\relax
7312         \unrestored@protected@xdef\@thefnmark{\thempfn}%
7313       \endgroup
7314       \ifx\@footnotetext\@mpfootnotetext
7315         \expandafter\H@@mpfootnotetext
7316       \else
7317         \expandafter\H@@@footnotetext
7318       \fi
7319     }%

```

```

7320 \def\@xfootnotemark[#1]{%
7321   \begingroup
7322     \c@footnote #1\relax
7323     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7324   \endgroup
7325   \H@@footnotemark
7326 }%
7327 \let\H@@mpfootnotetext\@mpfootnotetext
7328 \long\def\@mpfootnotetext#1{%
7329   \H@@mpfootnotetext{%
7330     \ifHy@nesting
7331       \expandafter\ltx@firstoftwo
7332     \else
7333       \expandafter\ltx@secondoftwo
7334     \fi
7335     {%
7336       \expandafter\hyper@@anchor\expandafter{%
7337         \Hy@footnote@currentHref
7338       }\ignorespaces #1}%
7339   }{%
7340     \Hy@raisedlink{%
7341       \expandafter\hyper@@anchor\expandafter{%
7342         \Hy@footnote@currentHref
7343       }\relax}%
7344     }\ignorespaces #1%
7345   }%
7346 }%
7347 }%
7348 \long\def\@footnotetext#1{%
7349   \H@@footnotetext{%
7350     \ifHy@nesting
7351       \expandafter\ltx@firstoftwo
7352     \else
7353       \expandafter\ltx@secondoftwo
7354     \fi
7355     {%
7356       \expandafter\hyper@@anchor\expandafter{%
7357         \Hy@footnote@currentHref
7358       }\ignorespaces #1}%
7359   }{%
7360     \Hy@raisedlink{%
7361       \expandafter\hyper@@anchor\expandafter{%
7362         \Hy@footnote@currentHref
7363       }\relax}%
7364     }%
7365     \let\@currentHref\Hy@footnote@currentHref
7366     \let\@currentlabelname\@empty
7367     \ignorespaces #1%
7368   }%
7369 }%
7370 }%

```

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.

```

7371 \def\@footnotemark{%
7372 \leavevmode
7373 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7374 \stepcounter{Hfootnote}%
7375 \global\let\Hy@saved@currentHref\@currentHref
7376 \hyper@makecurrent{Hfootnote}%
7377 \global\let\Hy@footnote@currentHref\@currentHref
7378 \global\let\@currentHref\Hy@saved@currentHref
7379 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7380 \@makefnmark
7381 \hyper@linkend
7382 \ifhmode\spacefactor\@x@sf\fi
7383 \relax
7384 }%

```

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

```

7385 \@ifpackageloaded{tabularx}{%
7386 \let\HyOrg@TX@endtabularx\TX@endtabularx
7387 \def\Hy@tabularx@hook{%
7388 \let\@footnotetext\H@@footnotetext
7389 \let\@footnotemark\H@@footnotemark
7390 \let\@mpfootnotetext\H@@mpfootnotetext
7391 }%
7392 \begingroup
7393 \toks@\expandafter{\TX@endtabularx}%
7394 \xdef\Hy@gtemp{%
7395 \noexpand\Hy@tabularx@hook
7396 \the\toks@
7397 }%
7398 \endgroup
7399 \let\TX@endtabularx\Hy@gtemp
7400 }{}%

```

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

```

7401 \@ifpackageloaded{longtable}{%
7402 \CheckCommand{\LT@p@ftntext}[1]{%
7403 \edef\@tempa{%
7404 \the\LT@p@ftn
7405 \noexpand\footnotetext[\the\c@footnote]%
7406 }%
7407 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7408 }%
7409 \long\def\LT@p@ftntext#1{%
7410 \edef\@tempa{%
7411 \the\LT@p@ftn
7412 \begingroup
7413 \noexpand\c@footnote=\the\c@footnote\relax
7414 \noexpand\protected@xdef\noexpand\@thefnmark{%

```

```

7415         \noexpand\thempfn
7416     }%
7417     \noexpand\Hy@LT@footnotetext{%
7418         \Hy@footnote@currentHref
7419     }%
7420 }%
7421 \global\LT@p@ftn\expandafter{%
7422     \@tempa{#1}%
7423     \endgroup
7424 }%
7425 }%
7426 \long\def\Hy@LT@footnotetext#1#2{%
7427     \H@footnotetext{%
7428         \ifHy@nesting
7429             \hyper@@anchor{#1}{#2}%
7430         \else
7431             \Hy@raisedlink{%
7432                 \hyper@@anchor{#1}{\relax}%
7433             }%
7434             \def\@currentHref{#1}%
7435             \let\@currentlabelname\@empty
7436             #2%
7437         \fi
7438     }%
7439 }%
7440 }-%

```

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

```

7441 \ifpackageloaded{fancyvrb}{%
7442     \def\V@footnotetext{%
7443         \insert\footins\bgroup
7444         \csname reset@font\endcsname
7445         \footnotesize
7446         \interlinepenalty\interfootnotelinepenalty
7447         \splittopskip\footnotesep
7448         \splitmaxdepth\dp\strutbox
7449         \floatingpenalty \@MM
7450         \hsize\columnwidth
7451         \@parboxrestore
7452         \def\@currentcounter{footnote}%
7453         \protected@edef\@currentlabel{\csname p@footnote\endcsname\@thefn-
mark}%
7454         \@makefn-text{%
7455             \rule{\z@}{\footnotesep}%
7456         \bgroup
7457         \aftergroup\V@@@footnotetext
7458         \Hy@raisedlink{%
7459             \expandafter\hyper@@anchor\expandafter{%
7460                 \Hy@footnote@currentHref
7461             }\relax}%
7462         }%
7463         \let\@currentHref\Hy@footnote@currentHref
7464         \let\@currentlabelname\@empty
7465         \ignorespaces
7466     }%

```

```
7467 }{}%
```

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

```
7468 \def\Hy@temp#1{%
7469   \begingroup
7470   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7471   \endgroup
7472   \@footnotemark
7473 }%
7474 \ifx\Hy@temp\footref
7475   \def\footref#1{%
7476     \begingroup
7477     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7478     \endgroup
7479     \H@@@footnotemark
7480   }%
7481   \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.

```
7482 \let\HyOrg@maketitle\maketitle
7483 \def\maketitle{%
7484   \let\Hy@saved@footnotemark\@footnotemark
7485   \let\Hy@saved@footnotetext\@footnotetext
7486   \let\@footnotemark\H@@@footnotemark
7487   \let\@footnotetext\H@@@footnotetext
7488   \@ifnextchar[\Hy@maketitle@optarg{% ]
7489     \HyOrg@maketitle
7490     \Hy@maketitle@end
7491   }%
7492 }%
7493 \def\Hy@maketitle@optarg[#1]{%
7494   \HyOrg@maketitle[{#1}]%
7495   \Hy@maketitle@end
7496 }%
7497 \def\Hy@maketitle@end{%
7498   \ifx\@footnotemark\H@@@footnotemark
7499     \let\@footnotemark\Hy@saved@footnotemark
7500   \fi
7501   \ifx\@footnotetext\H@@@footnotetext
7502     \let\@footnotetext\Hy@saved@footnotetext
7503   \fi
7504 }%
```

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

```
7505 \def\realfootnote{%
7506   \@ifnextchar[\@xfootnote%]
7507   {\stepcounter{\@mpfn}%
7508     \protected@xdef\@thefnmark{\thempfn}%
7509     \H@@@footnotemark\H@@@footnotetext
7510   }%
7511 }%
```



```

7512 \fi
7513 }{}
7514 \Hy@DisableOption{hyperfootnotes}

7515 \</packageEnd>
7516 \<*check>
7517 \checklatex
7518 \checkcommand\def\@xfootnotenext[#1]{%
7519   \begingroup
7520     \csname c@\@mpfn\endcsname #1\relax
7521     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7522   \endgroup
7523   \@footnotetext
7524 }
7525 \checkcommand\def\@xfootnotemark[#1]{%
7526   \begingroup
7527     \c@footnote #1\relax
7528     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7529   \endgroup
7530   \@footnotemark
7531 }
7532 \checkcommand\def\@footnotemark{%
7533   \leavevmode
7534   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7535   \@makefnmark
7536   \ifhmode\spacefactor\@x@sf\fi
7537   \relax
7538 }
7539 \</check>
7540 \<*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.

```

7541 \<@ifundefined{hyper@nopatch@caption}{%
7542 \def\caption{%
7543   \ifx\@cuptype\@undefined
7544     \@latex@error{\noexpand\caption outside float}\@ehd
7545     \expandafter\@gobble
7546   \else
7547     \H@refstepcounter\@cuptype
7548     \let\Hy@tempa\@caption
7549     \<@ifundefined{float@caption}{%
7550     }{%
7551       \expandafter\ifx\csname @float@c@\@cuptype\endcsname
7552         \float@caption
7553       \let\Hy@tempa\Hy@float@caption
7554     \fi
7555     }%
7556     \expandafter\@firstofone
7557   \fi
7558   {\@dblarg{\Hy@tempa\@cuptype}}}%

```

```

7559 }
7560 \long\def\@caption#1[#2]#3{%
7561   \expandafter\ifx\csname if@capstart\expandafter\endcsname
7562     \csname iftrue\endcsname
7563     \global\let\@currentHref\hc@currentHref
7564   \else
7565     \hyper@makecurrent{\@capttype}%
7566   \fi
7567   \@ifundefined{NR@gettitle}{%
7568     \def\@currentlabelname{#2}%
7569   }{%
7570     \NR@gettitle{#2}%
7571   }%
7572   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7573     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7574   }%
7575   \begingroup
7576     \@parboxrestore
7577     \if@minipage
7578       \@setminipage
7579     \fi
7580     \normalsize
7581     \expandafter\ifx\csname if@capstart\expandafter\endcsname
7582       \csname iftrue\endcsname
7583     \global\@capstartfalse
7584     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7585   \else
7586     \@makecaption{\csname fnum@#1\endcsname}{%
7587       \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7588   \ifHy@nesting
7589     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7590   \else
7591     \Hy@raisedlink{%
7592       \expandafter\hyper@@anchor\expandafter{%
7593         \@currentHref
7594       }\relax}%
7595     }%
7596     #3%
7597   \fi
7598 }%
7599 \fi
7600 \par
7601 \endgroup
7602 }}{}}%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’.

```

7603 \let\Hy@float@caption\@caption
7604 \newcommand{\HyNew@float@makebox}[1]{%
7605   \HyOrg@float@makebox{%

```

```

7606 #1\relax
7607 \ifx\Hy@float@currentHref\@undefined
7608 \else
7609 \expandafter\hyper@@anchor\expandafter{%
7610 \Hy@float@currentHref
7611 }{\relax}%
7612 \global\let\Hy@float@currentHref\@undefined
7613 \fi
7614 }%
7615 }%
7616 \@ifpackageloaded{float}{%
7617 \def\Hy@float@caption{%
7618 \ifx\Hy@float@currentHref\@undefined
7619 \hyper@makecurrent{\@cuptype}%
7620 \global\let\Hy@float@currentHref\@currentHref
7621 \else
7622 \let\@currentHref\Hy@float@currentHref
7623 \fi
7624 \float@caption
7625 }%
7626 \let\HyOrg@float@makebox\float@makebox
7627 \let\float@makebox\HyNew@float@makebox
7628 }{}

7629 \</packageEnd>
7630 \< *check>
7631 \checklatex[1999/06/01 - 2000/06/01]
7632 \checkcommand\def\caption{%
7633 \ifx\@cuptype\@undefined
7634 \@latex@error{\noexpand\caption outside float}\@ehd
7635 \expandafter\@gobble
7636 \else
7637 \refstepcounter\@cuptype
7638 \expandafter\@firstofone
7639 \fi
7640 {\@dblarg{\@caption\@cuptype}}}%
7641 }
7642 \checkcommand\long\def\@caption#1[#2]#3{%
7643 \par
7644 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7645 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7646 }%
7647 \begingroup
7648 \@parboxrestore
7649 \if@minipage
7650 \@setminipage
7651 \fi
7652 \normalsize
7653 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7654 \endgroup
7655 }
7656 \</check>
7657 \< *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.

```

7658 \def\hyper@natlinkstart#1{%
7659   \Hy@backout{#1}%
7660   \hyper@linkstart{cite}{cite.#1}%
7661   \def\hyper@nat@current{#1}%
7662 }
7663 \def\hyper@natlinkend{%
7664   \hyper@linkend
7665 }
7666 \def\hyper@natlinkbreak#1#2{%
7667   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7668 }
7669 \def\hyper@natanchorstart#1{%
7670   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7671 }
7672 \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.

```

7673 \@ifundefined{hyper@nopatch@bib}
7674 {%
7675   \ltx@ifundefined{NAT@parse}{%
7676     \providecommand*\@extra@binfo{%
7677       \providecommand*\@extra@b@citeb{%
7678         \def\bibcite#1#2{%
7679           \@newl@bel{b}{#1\@extra@binfo}{%
7680             \hyper@@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7681           }%
7682         }%
7683       \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.”.

```

7684   \let\Hy@bibcite\bibcite
7685   \begingroup
7686     \@ifundefined{bbl@cite@choice}{%
7687       \g@addto@macro\bbl@cite@choice{%
7688         \let\bibcite\Hy@bibcite
7689       }%
7690     }%
7691   \endgroup

```

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

```

7692 \providecommand*{\@BIBLABEL}{\@biblabel}%
7693 \def\@lbibitem[#1]#2{%
7694   \@skiphyperreftrue
7695   \H@item{%
7696     \ifx\Hy@raisedlink\@empty
7697       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7698       \@BIBLABEL{#1}%
7699       \hyper@anchorend
7700     \else
7701       \Hy@raisedlink{%
7702         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7703       }%
7704       \@BIBLABEL{#1}%
7705     \fi
7706     \hfill
7707   }%
7708   \@skiphyperreffalse
7709   \if@filesw
7710     \begingroup
7711     \let\protect\noexpand
7712     \immediate\write\@auxout{%
7713       \string\bibcite{#2}{#1}%
7714     }%
7715     \endgroup
7716   \fi
7717   \ignorespaces
7718 }%

```

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

```

7719 \def\@bibitem#1{%
7720   \@skiphyperreftrue\H@item\@skiphyperreffalse
7721   \Hy@raisedlink{%
7722     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7723   }%
7724   \if@filesw
7725     \begingroup
7726     \let\protect\noexpand
7727     \immediate\write\@auxout{%
7728       \string\bibcite{#1}{\the\value{\@listctr}}%
7729     }%
7730     \endgroup
7731   \fi
7732   \ignorespaces
7733 }%
7734 }{}%
7735 }{}

7736 \</packageEnd>
7737 \<check>
7738 \checklatex
7739 \checkcommand\def\@lbibitem[#1]#2{%
7740   \item[\@biblabel{#1}]\hfill}%
7741   \if@filesw
7742     {%

```

```

7743 \let\protect\noexpand
7744 \immediate\write\@auxout{%
7745   \string\bibcite{#2}{#1}%
7746 }%
7747 }%
7748 \fi
7749 \ignorespaces
7750 }
7751 \checkcommand\def\@bibitem#1{%
7752   \item
7753   \if@filesw
7754     \immediate\write\@auxout{%
7755       \string\bibcite{#1}{\the\value{\@listctr}}%
7756     }%
7757   \fi
7758   \ignorespaces
7759 }
7760 \end{check}
7761 \end{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 pdf \TeX , then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

7762 \ifpackageloaded{harvard}{%
7763   \Hy@AtBeginDocument{%
7764     \Hy@Info{*** compatibility with harvard **** }%
7765     \Hy@raiselinksfalse
7766     \def\harvardcite#1#2#3#4{%
7767       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{cite.#1}{#2}}%
7768       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{cite.#1}{#3}}%
7769       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{cite.#1}{#4}}%
7770       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
7771     }%
7772     \def\HAR@citetoaux#1{%
7773       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7774       \ifHy@backref
7775         \ifx\@empty\@currentlabel
7776         \else
7777           \@bsphack
7778           \if@filesw
7779             \protected@write\@auxout{}{%
7780               \string\writefile{brf}{%
7781                 \string\backcite{#1}{%
7782                   {\thepage}{\@currentlabel}{\@currentHref}%
7783                 }%
7784               }%
7785             }%

```

```

7786     \fi
7787     \@esphack
7788     \fi
7789     \fi
7790 }%
7791 \def\harvarditem{%
7792   \@ifnextchar{\@harvarditem}{\@harvarditem[\null]}%
7793 }%
7794 \def\@harvarditem[#1]#2#3#4#5\par{%
7795   \item[]%
7796   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7797   \if@filesw
7798     \begingroup
7799     \def\protect##1{\string ##1\space}%
7800     \ifthenelse{\equal{#1}{\null}}%
7801       {\def\next{{#4}{#2}{#2}{#3}}}%
7802       {\def\next{{#4}{#2}{#1}{#3}}}%
7803     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7804     \endgroup
7805   \fi
7806   \protect\hspace*{-\labelwidth}%
7807   \protect\hspace*{-\labelsep}%
7808   \ignorespaces
7809   #5%
7810   \ifHy@backref
7811     \newblock
7812     \backref{\csname br@#4\endcsname}%
7813   \fi
7814   \par
7815 }%

```

\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:

```

7816   \long\def\HAR@checkcitations#1#2#3#4{%
7817     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
7818     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7819       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
7820       \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7821         \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
7822         \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7823           \else
7824             \@tempswatrue
7825           \fi
7826         \else
7827           \@tempswatrue
7828         \fi
7829       \else
7830         \@tempswatrue
7831       \fi
7832     }%
7833   }%
7834 }{}

```

36.2 Package chicago

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

```

7835 \@ifpackageloaded{chicago}{%

\citeN
7836 \def\citeN{%
7837 \def\@citesep{-1000}%
7838 \def\cite##1##2{##1}%
7839 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7840 \@citedata@opt
7841 }%

\shortciteN
7842 \def\shortciteN{%
7843 \def\@citesep{-1000}%
7844 \def\cite##1##2{##1}%
7845 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
7846 \@citedata@opt
7847 }%

\@citedata@opt
7848 \def\@citedata@opt{%
7849 \let\@cite@opt\@empty
7850 \@ifnextchar [{%
7851 \@tempswatrue
7852 \@citedatax@opt
7853 }{%
7854 \@tempswafalse
7855 \@citedatax[]%
7856 }%
7857 }%

\@citedatax@opt
7858 \def\@citedatax@opt[#1]{%
7859 \def\@cite@opt{, #1}%
7860 \@citedatax[{#1}]%
7861 }%

7862 }{}
```

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{pdfpageduration={}}`. This can be set with `\AtEndDocument`, but it can be too late, if the last page is already finished, or too early, if lots of float pages will follow. Therefore currently nothing is done by `hyperref`.

Experimental!

This where we supply a destination for each page.

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

```

7863 \def\@currentHpage{Doc-Start}
```



```

7864 \ltx@ifclassloaded{slides}{%
7865   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
7866   \def\Hy@PageAnchorSlidesPlain{%
7867     \advance\c@page\ltx@one
7868     \xdef\@currentHpage{page.\the\c@slide.\the\c@overlay.\the\c@note%
7869       \ifnum\c@page=\ltx@one
7870       \else
7871       .\the\c@page
7872       \fi}%
7873   \edef\Hy@TempPageAnchor{%
7874     \noexpand\hyper@@anchor{%
7875       \@currentHpage
7876     }%
7877   }%
7878   \advance\c@page-\ltx@one
7879 }%
7880 \def\Hy@PageAnchorSlide{%
7881   \advance\c@page\ltx@one
7882   \ifnum\c@page>\ltx@one
7883     \ltx@ifundefined{theHpage}{%
7884       \protected@edef\Hy@TheSlideOptionalPage{%
7885         \Hy@SlidesFormatOptionalPage{theHpage}%
7886       }%
7887     }{%
7888       \protected@edef\Hy@TheSlideOptionalPage{%
7889         \Hy@SlidesFormatOptionalPage{theHpage}%
7890       }%
7891     }%
7892   \else
7893     \def\Hy@TheSlideOptionalPage{}%
7894   \fi
7895   \advance\c@page-\ltx@one
7896   \pdfstringdef\@the@H@page{%
7897     \csname
7898       the%
7899       \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
7900       \Hy@SlidesPage
7901     \endcsname
7902     \Hy@TheSlideOptionalPage
7903   }%
7904   \ltx@gobblethree
7905 }%
7906 \def\Hy@SlidesPage{slide}%
7907 \g@addto@macro\slide{%
7908   \def\Hy@SlidesPage{slide}%
7909 }%
7910 \g@addto@macro\overlay{%
7911   \def\Hy@SlidesPage{overlay}%
7912 }%
7913 \g@addto@macro\note{%
7914   \def\Hy@SlidesPage{note}%
7915 }%
7916 }{%
7917   \def\Hy@PageAnchorSlidesPlain{}%

```

```

7918 \def\Hy@PageAnchorSlide{}%
7919 }
7920 \def\Hy@EveryPageAnchor{%
7921 \Hy@DistillerDestFix
7922 \ifHy@pageanchor
7923 \ifHy@hypertextnames
7924 \ifHy@plainpages
7925 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7926 \xdef\@currentHpage{page.\the\c@page}%
7927 \Hy@PageAnchorSlidesPlain
7928 \else
7929 \begingroup
7930 \let\@number\@firstofone
7931 \Hy@unicodedefalse
7932 \Hy@PageAnchorSlide
7933 \pdfstringdef\@the@H@page{\thepage}%
7934 \endgroup
7935 \EdefUnescapeString\@the@H@page{\@the@H@page}%
7936 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7937 \xdef\@currentHpage{page.\@the@H@page}%
7938 \fi
7939 \else
7940 \Hy@GlobalStepCount\Hy@pagecounter
7941 \def\Hy@TempPageAnchor{%
7942 \hyper@@anchor{page.\the\Hy@pagecounter}%
7943 }%
7944 \xdef\@currentHpage{page.\the\Hy@pagecounter}%
7945 \fi
7946 \vbox to 0pt{%
7947 \kern\voffset
7948 \kern\topmargin
7949 \kern-1bp\relax
7950 \hbox to 0pt{%
7951 \kern\hoffset
7952 \kern\ifodd\value{page}%
7953 \oddsidemargin
7954 \else
7955 \evensidemargin
7956 \fi
7957 \kern-1bp\relax
7958 \Hy@TempPageAnchor\relax
7959 \hss
7960 }%
7961 \vss
7962 }%
7963 \fi
7964 }
7965 \g@addto@macro\Hy@EveryPageBoxHook{%
7966 \Hy@EveryPageAnchor
7967 }

```

38 Table of contents

TV Raman noticed that people who add arbitrary material into the TOC generate a bad or null link. We avoid that by checking if the current destination is empty. But if ‘the most recent destination’ is not what you expect, you will be in trouble. In newer L^AT_EX releases this is defined to put a % at the end of the line in the tocfile.

```

7968 \providecommand\protected@file@percent{}
7969 \@ifundefined{hyper@nopatch@toc}{%
7970   \def\addcontentsline#1#2#3{% toc extension, type, tag
7971     \begingroup
7972     \let\label\@gobble
7973     \ifx\@currentHref\@empty
7974       \Hy@Warning{%
7975         No destination for bookmark of \string\addcontentsline,%
7976         \MessageBreak destination is added%
7977       }%
7978     \phantomsection
7979   \fi
7980   \expandafter\ifx\csname toplevel@#2\endcsname\relax
7981     \begingroup
7982     \def\Hy@tempa{#1}%
7983     \ifx\Hy@tempa\Hy@bookmarkstype
7984       \Hy@WarningNoLine{%
7985         bookmark level for unknown #2 defaults to 0%
7986       }%
7987     \else
7988       \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7989     \fi
7990   \endgroup
7991   \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7992 \fi
7993 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
7994 \Hy@writebookmark{\csname the#2\endcsname}%
7995   {#3}%
7996   {\@currentHref}%
7997   {\Hy@toplevel}%
7998   {#1}%
7999 \ifHy@verbose
8000   \begingroup
8001     \def\Hy@tempa{#3}%
8002     \@onelevel@sanitize\Hy@tempa
8003     \let\temp@online\on@line
8004     \let\on@line\@empty
8005     \Hy@Info{%
8006       bookmark\temp@online:\MessageBreak
8007       thecounter {\csname the#2\endcsname}\MessageBreak
8008       text {\Hy@tempa}\MessageBreak
8009       reference {\@currentHref}\MessageBreak
8010       toplevel {\Hy@toplevel}\MessageBreak
8011       type {#1}%
8012     }%
8013   \endgroup

```

```

8014 \fi
8015 \addtocontents{#1}{%
8016 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8017 }%
8018 \endgroup
8019 }
8020 }{}

```

`\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:

```

8021 \protected\def\Hy@toclinkstart{\hyper@linkstart{link}{\Hy@tocdestname}}
8022 \protected\def\Hy@toclinkend{\hyper@linkend}
8023
8024 \ifundefined{hyper@nopatch@toc}{%
8025 \def\contentsline#1#2#3#4{%
8026 \begingroup
8027 \Hy@safe@activertrue
8028 \edef\x{\endgroup
8029 \def\noexpand\Hy@tocdestname{#4}%
8030 }\x
8031 \ifx\Hy@tocdestname\ltx@empty
8032 \csname l@#1\endcsname{#2}{#3}%
8033 \else
8034 \ifcase\Hy@linktoc % none
8035 \csname l@#1\endcsname{#2}{#3}%
8036 \or % section
8037 \csname l@#1\endcsname{%
8038 \Hy@toclinkstart{#2}\Hy@toclinkend
8039 }{#3}%
8040 \or % page
8041 \def\Hy@temp{#3}%
8042 \ifx\Hy@temp\ltx@empty
8043 \csname l@#1\endcsname{#2}{#3}%
8044 \else
8045 \csname l@#1\endcsname{{#2}}{%
8046 \Hy@toclinkstart{#3}\Hy@toclinkend
8047 }%
8048 \fi
8049 \else % all
8050 \def\Hy@temp{#3}%
8051 \ifx\Hy@temp\ltx@empty
8052 \csname l@#1\endcsname{%
8053 \Hy@toclinkstart{#2}\Hy@toclinkend
8054 }{}%
8055 \else
8056 \csname l@#1\endcsname{%
8057 \Hy@toclinkstart{#2}\Hy@toclinkend
8058 }{%
8059 \Hy@toclinkstart{#3}\Hy@toclinkend
8060 }%
8061 \fi

```

```

8062 \fi
8063 \fi
8064 }
8065 }{}

8066 </packageEnd>
8067 <*check>
8068 \checklatex
8069 \checkcommand\def\addcontentsline#1#2#3{%
8070 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8071 }
8072 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8073 </check>
8074 <*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.

```

8075 \@ifundefined{hyper@nopatch@counter}
8076 {
8077 \let\H@definecounter\@definecounter
8078 \def\@definecounter#1{%
8079 \H@definecounter{#1}%
8080 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8081 }
8082 }{}

```

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.

```

8083 \@ifundefined{hyper@nopatch@counter}
8084 {
8085 \let\H@newctr\@newctr
8086 \def\@newctr#1[#2]{%
8087 \H@newctr#1[{#2}]%
8088 \expandafter\gdef\csname theH#1\endcsname{%
8089 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8090 }%
8091 }
8092 }{}

```

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

```

8093 \ifundefined{hyper@nopatch@amsmath@tag}
8094 {%
8095   \AddToHook{package/amsmath/after}{%
8096     \def\Hy@make@anchor{%
8097       \Hy@MakeCurrentHrefAuto{AMS}%
8098       \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8099     }%
8100     \def\Hy@make@df@tag@@#1{%
8101       \gdef\df@tag{%
8102         \maketag@@@{\Hy@make@anchor#1}%
8103         \def\@currentlabel{#1}%
8104       }%
8105     }%
8106     \def\Hy@make@df@tag@@@#1{%
8107       \gdef\df@tag{%
8108         \tagform@{\Hy@make@anchor#1}%
8109         \toks@{\xp{p@equation{#1}}}%
8110         \edef\@currentlabel{\the\toks@}%
8111       }%
8112     }%
8113     \let\HyOrg@make@df@tag@@\make@df@tag@@
8114     \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8115     \let\make@df@tag@@\Hy@make@df@tag@@
8116     \let\make@df@tag@@@\Hy@make@df@tag@@@
8117   }{}
8118 }{}

```

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.

```

8119 \ifundefined{hyper@nopatch@counter}
8120 {
8121   \let\HyOrg@addtoreset\@addtoreset
8122   \def\@addtoreset#1#2{%
8123     \HyOrg@addtoreset{#1}{#2}%
8124     \expandafter\xdef\csname theH#1\endcsname{%
8125       \expandafter\noexpand
8126       \csname the\@ifundefined{theH#2}{H#2\endcsname
8127       .\noexpand\the\noexpand\value{#1}}%
8128     }%
8129   }
8130 }{}

```

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

```

8131 </packageEnd>
8132 <*check>
8133 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8134 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8135   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8136     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8137       \@addtoreset{#2}{#3}%
8138       \@xp\xdef\csname the#2\endcsname{%
8139         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8140       }%
8141     }%
8142   }%
8143 }%
8144 </check>

```

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

```

8145 <*packageEnd>
8146 \@ifundefined{hyper@nopatch@counter}
8147 {
8148   \AddToHook{package/amsmath/after}{%
8149     \renewcommand*{\numberwithin}[3][\arabic]{%
8150       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8151         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8152           \HyOrg@addtoreset{#2}{#3}%
8153           \@xp\xdef\csname the#2\endcsname{%
8154             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8155           }%
8156           \@xp\xdef\csname theH#2\endcsname{%
8157             \@xp\@nx
8158             \csname the\@ifundefined{theH#3}{}H#3\endcsname
8159             .\@nx#1{#2}%
8160           }%
8161         }%
8162       }%
8163     }%
8164   }{}
8165 }{}

```

41 Included figures

Simply intercept the low level graphics package macro.

```

8166 \ifHy@hyperfigures
8167   \let\Hy@Gin@setfile\Gin@setfile
8168   \def\Gin@setfile#1#2#3{%
8169     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8170   }%
8171 \fi
8172 \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.

```

8173 \ifHy@hyperindex
8174   \def\HyInd@ParenLeft{({}%
8175   \def\HyInd@ParenRight{)}}%
8176   \def\hyperindexformat#1#2{%
8177     \let\HyOrg@hyperpage\hyperpage
8178     \let\hyperpage\@firstofone
8179     #1{\HyOrg@hyperpage{#2}}%
8180     \let\hyperpage\HyOrg@hyperpage
8181   }%
8182   \Hy@nextfalse
8183   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8184   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8185   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8186   \begingroup
8187     \lccode`\|=\expandafter`\HyInd@EncapChar\relax
8188     \lccode`\|/\=\relax
8189   \lowercase{\endgroup
8190   \ifHy@next
8191     \let\HyInd@org@wrindex\@wrindex
8192     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|}%
8193     \def\HyInd@@wrindex#1#2|#3|#4|{%
8194       \ifx\|#3|}%
8195       \HyInd@org@wrindex{#1}{#2|hyperpage}%
8196     \else
8197       \HyInd@@@wrindex{#1}{#2}#3|}%
8198     \fi
8199   }%
8200   \def\HyInd@@@wrindex#1#2#3#4|{%
8201     \def\Hy@temp@A{#3}%
8202     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8203       \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8204     \relax
8205     \HyInd@org@wrindex{#1}{%
8206       #2|hyperindexformat{/#3#4}%
8207     }%
8208   \else
8209     \ifx\|#4|}%
8210     \ifx\Hy@temp@A\HyInd@ParenRight
8211       \HyInd@org@wrindex{#1}{#2|#3}%
8212     \else
8213       \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8214     \fi

```



```

8215         \else
8216             \HyInd@org@wrindex{#1}{%
8217                 #2|#3hyperindexformat{/#4}%
8218             }%
8219         \fi
8220     \fi
8221 }%
8222 \else
8223     \def\@wrindex#1{\@@wrindex#1||\}%
8224     \def\@@wrindex#1|#2|#3\{\%
8225         \if@filesw
8226             \ifx\|#2\%
8227                 \protected@write\@indexfile{\%
8228                     \string\indexentry{#1|hyperpage}{\thepage}%
8229                 }%
8230             \else
8231                 \HyInd@@@wrindex{#1}#2\%
8232             \fi
8233         \fi
8234     \endgroup
8235     \@esphack
8236 }%
8237 \def\HyInd@@@wrindex#1#2#3\{\%
8238     \def\Hy@temp@A{#2}%
8239     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8240         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8241         \relax
8242     \protected@write\@indexfile{\%
8243         \string\indexentry{%
8244             #1|hyperindexformat{/#2#3}%
8245         }{\thepage}%
8246     }%
8247 \else
8248     \ifx\|#3\%
8249         \ifx\Hy@temp@A\HyInd@ParenRight
8250             \HyInd@DefKey{#1}%
8251             \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8252                 \let\Hy@temp\ltx@empty
8253             }{\%
8254                 \expandafter\let\expandafter\Hy@temp
8255                     \csname HyInd@(\HyInd@key)\endcsname
8256             }%
8257             \protected@write\@indexfile{\%
8258                 \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8259             }%
8260         \else
8261             \protected@write\@indexfile{\%
8262                 \string\indexentry{#1|#2hyperpage}{\thepage}%
8263             }%
8264             \HyInd@DefKey{#1}%
8265             \expandafter
8266             \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8267                 hyperpage%
8268             }%

```

```

8269     \fi
8270   \else
8271     \protected@write\@indexfile{}\{
8272       \string\indexentry{
8273         #1|#2hyperindexformat{/#3}%
8274       }\thepage}%
8275   }%
8276   \ifx\Hy@temp@A\HyInd@ParenLeft
8277     \HyInd@DefKey{#1}%
8278     \expandafter
8279     \gdef\csname HyInd@(\HyInd@key)\endcsname{
8280       hyperindexformat{/#3}%
8281     }%
8282   \fi
8283 \fi
8284 \fi
8285 }%
8286 \def\HyInd@DefKey#1{%
8287   \begingroup
8288     \let\protect\@unexpandable@protect
8289     \edef\Hy@temp{#1}%
8290     \ltx@onelevel@sanitize\Hy@temp
8291     \global\let\HyInd@key\Hy@temp
8292   \endgroup
8293 }%
8294 \fi
8295 }%
8296 \fi
8297 \Hy@DisableOption{hyperindex}
8298 \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.

```
8299 \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.

```

8300 \def\hyperpage#1{%
8301   \HyInd@hyperpage#1\nohyperpage{}\@nil
8302 }
8303 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8304   \HyInd@@hyperpage{#1}%
8305   #2%
8306   \def\Hy@temp{#3}%
8307   \ifx\Hy@temp\@empty
8308   \else
8309     \ltx@ReturnAfterFi{
8310       \HyInd@hyperpage#3\@nil
8311     }%
8312   \fi
8313 }
8314 \def\HyInd@@hyperpage#1{\@hyperpage#1---\}
8315 \def\@hyperpage#1--#2--#3\{%
8316   \ifx\#2\%

```

```

8317 \@@commahyperpage{#1}%
8318 \else
8319 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8320 \fi
8321 }
8322 \def\@@commahyperpage#1{\@@commahyperpage#1, ,\}
8323 \def\@@commahyperpage#1, #2, #3\{\%
8324 \ifx\#2\%
8325 \HyInd@pagelink{#1}%
8326 \else
8327 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8328 \fi
8329 }

```

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

```

8330 \def\HyInd@pagelink#1{%
8331 \begingroup
8332 \toks@={}%
8333 \HyInd@removespaces#1 \@nil
8334 \endgroup
8335 }
8336 \def\HyInd@removespaces#1 #2\@nil{%
8337 \toks@=\expandafter{\the\toks@#1}%
8338 \ifx\#2\%
8339 \edef\x{\the\toks@}%
8340 \ifx\x\@empty
8341 \else
8342 \hyperlink{page.\the\toks@}{\the\toks@}%
8343 \fi
8344 \else
8345 \ltx@ReturnAfterFi{%
8346 \HyInd@removespaces#2\@nil
8347 }%
8348 \fi
8349 }

```

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.

```

8350 \ifHy@texht
8351 \expandafter\endinput
8352 \fi
8353 \let\real@setref\@setref
8354 \def\@setref#1#2#3{% csname, extract group, refname
8355 \ifx#1\relax
8356 \protect\G@refundefinedtrue
8357 \nfss@text{\reset@font\bfseries ??}%
8358 \@latex@warning{%
8359 Reference `#3' on page \thepage \space undefined%
8360 }%
8361 \else
8362 \expandafter\Hy@setref@link#1\@empty\@empty\@empty\@nil{#2}%
8363 \fi

```

8364 }

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

```

8365 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8366   \begingroup
8367   \toks0={\hyper@link{#5}{#4}}%
8368   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8369   \edef\x{\endgroup
8370     \the\toks0 {\the\toks1 }%
8371   }%
8372   \x
8373 }
8374 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8375   \ifx#1\relax
8376     \protect\G@refundefinedtrue
8377     \nfss@text{\reset@font\bfseries ??}%
8378     \@latex@warning{%
8379       Reference `#3' on page \thepage \space undefined%
8380     }%
8381   \else
8382     \protect\hyper@@link
8383     {\expandafter\@fifthoffive#1}%
8384     {page.\expandafter\@secondoffive#1}%
8385     {\expandafter\@secondoffive#1}%
8386   \fi
8387 }
8388 \</packageEnd>
8389 \< *check>
8390 \checklatex
8391 \checkcommand\def\@setref#1#2#3{%
8392   \ifx#1\relax
8393     \protect\G@refundefinedtrue
8394     \nfss@text{\reset@font\bfseries ??}%
8395     \@latex@warning{%
8396       Reference `#3' on page \thepage \space undefined%
8397     }%
8398   \else
8399     \expandafter#2#1\< null
8400   \fi
8401 }
8402 \< /check>
8403 \< *packageEnd>

```

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

```

8404 \def\HyRef@StarSetRef#1{%
8405   \begingroup
8406   \Hy@safe@activestru
8407   \let\protect\@unexpandable@protect
8408   \edef\x{#1}%
8409   \@onelevel@sanitize\x
8410   \edef\x{\endgroup
8411     \noexpand\HyRef@@StarSetRef

```

```

8412 \expandafter\noexpand\csname r@\x\endcsname{\x}%
8413 }%
8414 \x
8415 }
8416 \def\HyRef@@StarSetRef#1#2#3{%
8417 \ifx#1\@undefined
8418 \let#1\relax
8419 \fi
8420 \real@setref#1#3{#2}%
8421 }
8422 \def\@refstar#1{%
8423 \HyRef@StarSetRef{#1}\@firstoffive
8424 }
8425 \def\@pagerefstar#1{%
8426 \HyRef@StarSetRef{#1}\@secondoffive
8427 }
8428 \def\@namerefstar#1{%
8429 \HyRef@StarSetRef{#1}\@thirdoffive
8430 }
8431 \def\@Refstar#1{%
8432 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8433 }%
8434 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8435 \MakeUppercase#1%
8436 }%
8437 \def\HyRef@Ref#1{%
8438 \hyperref[{#1}]{\Ref*{#1}}%
8439 }%
8440 \Hy@AtBeginDocument{%
8441 \@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.

```

8442 \@ifundefined{hyper@nopatch@varioref}
8443 {
8444 \renewcommand\Vref@star[2][]{%
8445 \begingroup
8446 \let\T@pageref\@pagerefstar
8447 \Ref*{#2}
8448 \vpageref[#1]{#2}%
8449 \endgroup
8450 }%
8451 \renewcommand\Vr@f[2][]{%
8452 \begingroup
8453 \let\T@pageref\@pagerefstar
8454 \hyperref[{#2}]{%
8455 \Ref*{#2}
8456 \vpageref[#1]{#2}%
8457 }%
8458 \endgroup
8459 }%
8460 \renewcommand\vr@f[2][]{%
8461 \begingroup

```

```

8462 \let\T@pageref\@pagerefstar
8463 \hyperref[{\#2}]{%
8464 \ref*{\#2}
8465 \vpageref[\#1]{\#2}%
8466 }%
8467 \endgroup
8468 }%
8469 \renewcommand\vref@star[2][]{%
8470 \begingroup
8471 \let\T@pageref\@pagerefstar
8472 \ref*{\#2}
8473 \vpageref[\#1]{\#2}%
8474 \endgroup
8475 }%
8476 }{}%
8477 }{}%
8478 }

8479 \DeclareRobustCommand*\autopageref{%
8480 \ifstar{%
8481 \HyRef@autopagerefname\pageref*%
8482 }\HyRef@autopageref
8483 }
8484 \def\HyRef@autopageref#1{%
8485 \hyperref[{\#1}]{\HyRef@autopagerefname\pageref*{\#1}}%
8486 }
8487 \def\HyRef@autopagerefname{%
8488 \ltx@ifundefined{pageautorefname}{%
8489 \ltx@ifundefined{pagename}{%
8490 \Hy@Warning{No autoref name for `page'}%
8491 }{%
8492 \pagename\nobreakspace
8493 }%
8494 }{%
8495 \pageautorefname\nobreakspace
8496 }%
8497 }

```

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

```

8498 \NewDocumentCommand\autoref{s}
8499 {\leavevmode
8500 \IfBooleanTF{\#1}{\HyRef@autoref\@gobbletwo}{\HyRef@autoref\hyper@@link}}
8501 \def\HyRef@autoref#1#2{%
8502 \begingroup
8503 \Hy@safe@activestrue
8504 \expandafter\HyRef@autosetref\csname r@#2\endcsname{\#2}{\#1}%
8505 \endgroup
8506 }
8507 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8508 \HyRef@ShowKeysRef{\#2}%
8509 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8510 \edef\HyRef@thisref{%
8511 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8512 }%

```

```

8513 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8514 \Hy@safe@activesfalse
8515 #3{%
8516 \expandafter\@fifthoffive#1\@empty\@empty\@empty
8517 }{%
8518 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8519 }{%
8520 \HyRef@currentHtag
8521 \expandafter\@firstoffive#1\@empty\@empty\@empty
8522 \null
8523 }%
8524 \else
8525 \protect\G@refundefinedtrue
8526 \nfss@text{\reset@font\bfseries ??}%
8527 \@latex@warning{%
8528 Reference `#2' on page \thepage\space undefined%
8529 }%
8530 \fi
8531 }
8532 \def\HyRef@testreftype#1.#2\.{%
8533 \ltx@ifundefined{#1autorefname}{%
8534 \ltx@ifundefined{#1name}{%
8535 \HyRef@StripStar#1\*\@nil{#1}%
8536 \ltx@ifundefined{\HyRef@name autorefname}{%
8537 \ltx@ifundefined{\HyRef@name name}{%
8538 \def\HyRef@currentHtag{%
8539 \Hy@Warning{No autoref name for `#1'}%
8540 }{%
8541 \edef\HyRef@currentHtag{%
8542 \expandafter\noexpand\csname\HyRef@name name\endcsname
8543 \noexpand~%
8544 }%
8545 }%
8546 }{%
8547 \edef\HyRef@currentHtag{%
8548 \expandafter\noexpand
8549 \csname\HyRef@name autorefname\endcsname
8550 \noexpand~%
8551 }%
8552 }%
8553 }{%
8554 \edef\HyRef@currentHtag{%
8555 \expandafter\noexpand\csname#1name\endcsname
8556 \noexpand~%
8557 }%
8558 }%
8559 }{%
8560 \edef\HyRef@currentHtag{%
8561 \expandafter\noexpand\csname#1autorefname\endcsname
8562 \noexpand~%
8563 }%
8564 }%
8565 }
8566 \def\HyRef@StripStar#1*\@nil#3{%

```

```

8567 \def\HyRef@name{#2}%
8568 \ifx\HyRef@name\HyRef@CaseStar
8569 \def\HyRef@name{#1}%
8570 \else
8571 \def\HyRef@name{#3}%
8572 \fi
8573 }
8574 \def\HyRef@CaseStar{*\\}
8575 \def\HyRef@currentHtag{}

```

Support for package `showkeys`.

`\HyRef@ShowKeysRef`

```

8576 \let\HyRef@ShowKeysRef@gobble
8577 \def\HyRef@ShowKeysInit{%
8578 \ifundefined{SK@@label}{-}
8579 {%
8580 \ifx\SK@ref\@empty
8581 \else
8582 \def\HyRef@ShowKeysRef{%
8583 \SK@\SK@@ref
8584 }%
8585 \fi
8586 }%
8587 }
8588 \AddToHook{package/showkeys/after}{\HyRef@ShowKeysInit}

```

Defaults for the names that `\autoref` uses.

```

8589 \providecommand*{\AMSautorefname}{\equationautorefname}
8590 \providecommand*{\Hfootnoteautorefname}{\footnoteautorefname}
8591 \providecommand*{\Itemautorefname}{\itemautorefname}
8592 \providecommand*{\itemautorefname}{item}
8593 \providecommand*{\equationautorefname}{Equation}
8594 \providecommand*{\footnoteautorefname}{footnote}
8595 \providecommand*{\itemautorefname}{item}
8596 \providecommand*{\figureautorefname}{Figure}
8597 \providecommand*{\tableautorefname}{Table}
8598 \providecommand*{\partautorefname}{Part}
8599 \providecommand*{\appendixautorefname}{Appendix}
8600 \providecommand*{\chapterautorefname}{chapter}
8601 \providecommand*{\sectionautorefname}{section}
8602 \providecommand*{\subsectionautorefname}{subsection}
8603 \providecommand*{\subsubsectionautorefname}{subsubsection}
8604 \providecommand*{\paragraphautorefname}{paragraph}
8605 \providecommand*{\subparagraphautorefname}{subparagraph}
8606 \providecommand*{\FancyVerbLineautorefname}{line}
8607 \providecommand*{\theoremautorefname}{Theorem}
8608 \providecommand*{\pageautorefname}{page}
8609 \</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`.

```
8610 (*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
8611 \begingroup\expandafter\expandafter\expandafter\endgroup
8612 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8613 \begingroup
8614 \catcode`\|=0 %
8615 \@makeother\|%
8616 |@firstofone{|endgroup
8617 |def|Hy@pstringdef#1#2{%
8618 |begingroup
8619 |edef~{|string~}%
8620 |xdef|Hy@gtemp{#2}%
8621 |endgroup
8622 |let#1|Hy@gtemp
8623 |@onelevel@sanitize#1%
8624 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
8625 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8626 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8627 }%
8628 |def|Hy@ExchangeBackslash#1/#2|@nil{%
8629 #1%
8630 |ifx|\#2|\%
8631 |else
8632 \\\%
8633 |ltx@ReturnAfterFi{%
8634 |Hy@ExchangeBackslash#2|@nil
8635 }%
8636 |fi
8637 }%
8638 }%
8639 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8640 #1%
8641 \ifx\#2\%
8642 \else
8643 \@backslashchar(%
8644 \ltx@ReturnAfterFi{%
8645 \Hy@ExchangeLeftParenthesis#2\@nil
8646 }%
8647 \fi
8648 }%
8649 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8650 #1%
8651 \ifx\#2\%
8652 \else
```

```

8653 \@@backslashchar)%
8654 \ltx@ReturnAfterFi{%
8655 \Hy@ExchangeRightParenthesis#2\@nil
8656 }%
8657 \fi
8658 }%
8659 \else
8660 \def\Hy@pstringdef#1#2{%
8661 \begingroup
8662 \edef~{\string~}%
8663 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8664 \endgroup
8665 \let#1\Hy@gtemp
8666 }%
8667 \fi
8668 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

43.2 pdfTeX

```

8669 (*pdfTeX)
8670 \providecommand*\XR@ext}{pdf}
8671 \Hy@setbreaklinks{true}
8672 \def\HyPat@ObjRef{%
8673 [0-9]*[1-9][0-9]* 0 R%
8674 }

```

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

```

8675 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
8676 \def\Hy@pdfminorversion{\pdfminorversion}%
8677 \ifHy@ocgcolorlinks
8678 \ifnum\Hy@pdfmajorminor@version<105 %
8679 \kvsetkeys{Hyp}{pdfversion=1.5}%
8680 \fi
8681 \fi
8682 \ifHy@setpdfversion
8683 \ifnum\Hy@pdf@majorminor@version<105 %
8684 \ltx@ifundefined{pdfobjcompresslevel}{%
8685 }{%
8686 \ifHy@verbose
8687 \Hy@InfoNoLine{%
8688 PDF object streams are disabled, because they are%
8689 \MessageBreak
8690 not supported in requested PDF version %
8691 \Hy@pdf@majorversion.\Hy@pdf@minorversion
8692 }%
8693 \fi
8694 \pdfobjcompresslevel=\ltx@zero
8695 }%

```

```

8696 \fi
8697 \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
8698 \else
8699 \let\Hy@temp\ltx@empty
8700 \def\Hy@temp@A#1#2{%
8701 \ifnum#1>\ltx@zero
8702 \edef\Hy@temp{%
8703 \Hy@temp
8704 \space\space
8705 \the#1\space #2%
8706 \ifnum#1=\ltx@one\else s\fi
8707 \MessageBreak
8708 }%
8709 \fi
8710 }%
8711 \Hy@temp@A\pdflastobj{PDF object}%
8712 \Hy@temp@A\pdflastxform{form XObject}%
8713 \Hy@temp@A\pdflastximage{image XObject}%
8714 \Hy@temp@A\pdflastannot{annotation}%
8715 \ltx@ifundefined{pdfastlink}{%
8716 }{%
8717 \Hy@temp@A\pdfastlink{link}%
8718 }%
8719 \ifx\Hy@temp\ltx@empty
8720 \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
8721 \Hy@pdfminorversion=\Hy@pdf@minorversion\relax
8722 \else
8723 \let\Hy@temp@A\ltx@empty
8724 \ifnum\Hy@pdf@majorminor@version=104 %
8725 \IfFileExists{pdf14.sty}{%
8726 \def\Hy@temp@A{%
8727 \MessageBreak
8728 Or \string\RequirePackage{pdf14} can be used%
8729 \MessageBreak
8730 before \string\documentclass\space as shortcut%
8731 }%
8732 }{}%
8733 \fi
8734 \Hy@WarningNoLine{%
8735 The PDF version number could not be set,\MessageBreak
8736 because some PDF objects are already written:%
8737 \MessageBreak
8738 \Hy@temp
8739 The version should be set as early as possible:%
8740 \MessageBreak
8741 \space\space
8742 \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
8743 \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
8744 \string\relax
8745 \ifnum\Hy@pdf@majorminor@version<105 %
8746 \ltx@ifundefined{pdfobjcompresslevel}{%
8747 }{%
8748 \MessageBreak
8749 \space\space

```

```

8750         \string\pdfobjcompresslevel=0\string\relax
8751     }%
8752     \fi
8753     \Hy@temp@A
8754 }%
8755 \fi
8756 \fi
8757 \PackageInfo{hyperref}{%
8758   \expandafter\string\Hy@pdfmajorversion.%
8759   \expandafter\string\Hy@pdfminorversion
8760   :=\number\Hy@pdf@majorversion.\number\Hy@pdf@minorversion\space
8761 }%
8762 \fi
8763 \edef\Hy@pdf@majorversion{\number\Hy@pdfmajorversion}%
8764 \edef\Hy@pdf@minorversion{\number\Hy@pdfminorversion}%
8765 \Hy@DisableOption{pdfversion}%

8766 \ifHy@ocgcolorlinks
8767   \pdf@ifdraftmode{}{%
8768     \immediate\pdfobj{%
8769       <<%
8770       /Type/OCG%
8771       /Name(View)%
8772       /Usage<<%
8773       /Print<<%
8774       /PrintState/OFF%
8775       >>%
8776       /View<<%
8777       /ViewState/ON%
8778       >>%
8779       >>%
8780     >>%
8781   }%
8782   \edef\OBJ@OCG@view{\the\pdfflastobj\space 0 R}%
8783   \immediate\pdfobj{%
8784     <<%
8785     /Type/OCG%
8786     /Name(Print)%
8787     /Usage<<%
8788     /Print<<%
8789     /PrintState/ON%
8790     >>%
8791     /View<<%
8792     /ViewState/OFF%
8793     >>%
8794     >>%
8795   >>%
8796 }%
8797 \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
8798 \immediate\pdfobj{%
8799   [%
8800     \OBJ@OCG@view\space\OBJ@OCG@print
8801   ]%
8802 }%
8803 \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%

```

```

8804 \pdfcatalog{%
8805   /OCProperties<<%
8806     /OCGs \OBJ@OCGs
8807     /D<<%
8808       /OFF[\OBJ@OCG@print]%
8809       /AS[%
8810         <<%
8811           /Event/View%
8812           /OCGs \OBJ@OCGs
8813           /Category[/View]%
8814         >>%
8815         <<%
8816           /Event/Print%
8817           /OCGs \OBJ@OCGs
8818           /Category[/Print]%
8819         >>%
8820         <<%
8821           /Event/Export%
8822           /OCGs \OBJ@OCGs
8823           /Category[/Print]%
8824         >>%
8825       ]%
8826     >>%
8827   >>%
8828 }%
8829 \begingroup
8830 \edef\x{\endgroup
8831   \pdfpageresources{%
8832     \the\pdfpageresources
8833     /Properties<<%
8834       /OCView \OBJ@OCG@view
8835       /OCPrint \OBJ@OCG@print
8836     >>%
8837   }%
8838 }%
8839 \x
8840 }%
8841 \Hy@AtBeginDocument{%
8842   \def\Hy@colorlink#1{%
8843     \begingroup
8844       \ifHy@ocgcolorlinks
8845         \def\Hy@ocgcolor{#1}%
8846         \setbox0=\hbox\bgroup\color@begingroup
8847       \else
8848         \HyColor@UseColor#1%
8849       \fi
8850     }%
8851   \def\Hy@endcolorlink{%
8852     \ifHy@ocgcolorlinks
8853       \color@endgroup\egroup
8854     \mbox{%
8855       \pdfliteral page{/OC/OCPrint BDC}%
8856       \rlap{\copy0}%
8857       \pdfliteral page{EMC/OC/OCView BDC}%

```

```

8858     \begingroup
8859     \expandafter\HyColor@UseColor\Hy@ocgcolor
8860     \box0 %
8861     \endgroup
8862     \pdfliteral page{EMC}%
8863   }%
8864   \fi
8865 \endgroup
8866 }%
8867 }%
8868 \else
8869 \Hy@DisableOption{ocgcolorlinks}%
8870 \fi

```

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

```

8871 \def\setpdfinkmargin#1{%
8872   \begingroup
8873   \setlength{\dimen@}{#1}%
8874   \expandafter\endgroup
8875   \expandafter\pdfinkmargin\the\dimen@\relax
8876 }
8877 \pdfinkmargin1pt %

```

First set up the default linking

```

8878 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

8879 \Hy@WrapperDef\new@pdfink#1{%
8880   \ifhmode
8881     \@savsf\spacefactor
8882   \fi
8883   \Hy@SaveLastskip
8884   \Hy@VerboseAnchor{#1}%
8885   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8886   \Hy@DestName\Hy@pstringDest\@pdfview
8887   \Hy@RestoreLastskip
8888   \ifhmode
8889     \spacefactor\@savsf
8890   \fi
8891 }
8892 \let\pdf@endanchor\@empty

```

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

```

8893 \def\Hy@DestName#1#2{%
8894   \pdfdest name{#1}#2\relax
8895 }

```

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.

```

8896 \providecommand*\@pdfborder{0 0 1}
8897 \providecommand*\@pdfborderstyle{}
8898 \def\Hy@undefinedname{UNDEFINED}

```

```

8899 \def\find@pdfink#1#2{%
8900   \leavevmode
8901   \protected@edef\Hy@testname{#2}%
8902   \ifx\Hy@testname\@empty
8903     \Hy@Warning{%
8904       Empty destination name,\MessageBreak
8905       using ` \Hy@undefinedname'%
8906     }%
8907     \let\Hy@testname\Hy@undefinedname
8908   \else
8909     \Hy@pstringdef\Hy@testname{%
8910       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8911     }%
8912   \fi
8913   \Hy@StartlinkName{%
8914     \ifHy@pdfa /F 4\fi
8915     \Hy@setpdfborder
8916     \Hy@setpdfhighlight
8917     \ifx\CurrentBorderColor\relax
8918       \else
8919         /C[\CurrentBorderColor]%
8920     \fi
8921   }\Hy@testname
8922   \expandafter\Hy@colorlink\csname @#1color\endcsname
8923 }
8924 \def\Hy@StartlinkName#1#2{%
8925   \pdfstartlink attr{#1}goto name{#2}\relax
8926 }
8927 \def\close@pdfink{%
8928   \Hy@endcolorlink
8929   \Hy@VerboseLinkStop
8930   \pdfendlink
8931 }
8932 \def\hyper@anchor#1{%
8933   \new@pdfink{#1}\anchor@spot\pdf@endanchor
8934 }
8935 \def\hyper@anchorstart#1{%
8936   \new@pdfink{#1}%
8937   \Hy@activeanchortrue
8938 }
8939 \def\hyper@anchorend{%
8940   \pdf@endanchor
8941   \Hy@activeanchorfalse
8942 }
8943 \def\hyper@linkstart#1#2{%
8944   \Hy@VerboseLinkStart{#1}{#2}%
8945   \ltx@ifundefined{@#1bordercolor}{%
8946     \let\CurrentBorderColor\relax
8947   }{%
8948     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8949   }%
8950   \find@pdfink{#1}{#2}%
8951 }
8952 \def\hyper@linkend{\close@pdfink}

```

```

8953 \def\hyper@link#1#2#3{%
8954   \Hy@VerboseLinkStart{#1}{#2}%
8955   \ltx@ifundefined{@#1bordercolor}{%
8956     \let\CurrentBorderColor\relax
8957   }{%
8958     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8959   }%
8960   \find@pdfink{#1}{#2}#3\Hy@xspace@end
8961   \close@pdfink
8962 }
8963 \let\CurrentBorderColor\@linkbordercolor
8964 \def\hyper@linkurl#1#2{%
8965   \begingroup
8966     \Hy@pstringdef\Hy@pstringURI{#2}%
8967     \hyper@chars
8968     \leavevmode
8969     \pdfstartlink
8970     attr{%
8971       \Hy@setpdfborder
8972       \Hy@setpdfhighlight
8973       \ifx\@urlbordercolor\relax
8974         \else
8975           /C[\@urlbordercolor]%
8976         \fi
8977     }%
8978     user{%
8979       /Subtype/Link%
8980       \ifHy@pdfa /F 4\fi
8981       /A<<%
8982       /Type/Action%
8983       /S/URI%
8984       /URI(\Hy@pstringURI)%
8985       \ifHy@href@cismap
8986         /IsMap true%
8987       \fi
8988       \Hy@href@nextactionraw
8989     >>%
8990   }%
8991   \relax
8992   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
8993   \close@pdfink
8994 \endgroup
8995 }
8996 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8997   \begingroup
8998     \def\Hy@pstringF{#2}%
8999     \Hy@CleanupFile\Hy@pstringF
9000     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9001     \Hy@pstringdef\Hy@pstringD{#3}%
9002     \Hy@MakeRemoteAction
9003     \leavevmode
9004     \pdfstartlink
9005     attr{%
9006       \Hy@setpdfborder

```



```

9007      \Hy@setpdfhighlight
9008      \ifx\@filebordercolor\relax
9009      \else
9010      /C[\@filebordercolor]%
9011      \fi
9012    }%
9013    user {%
9014      /Subtype/Link%
9015      \ifHy@pdfa /F 4\fi
9016      /A<<%
9017      /F(\Hy@pstringF)%
9018      /S/GoToR%
9019      \Hy@SetNewWindow

```

If #3 is empty, page 0; if its a number, Page number, otherwise a named destination.

```

\afterassignment\xxx\count@=0\foo!%

```

```

\def\xxx#1!{%
  \ifx\xxx#1\xxx
    foo was an integer
  \else
    it wasnt
  \fi}

```

```

9020      \ifx\#3\%
9021      /D[\Hy@href@page\@pdfremotestartview]%
9022      \else
9023      /D(\Hy@pstringD)%
9024      \fi
9025      \Hy@href@nextactionraw
9026      >>%
9027    }%
9028    \relax
9029    \Hy@colorlink\@filecolor#1\Hy@xspace@end
9030    \close@pdfink
9031  \endgroup
9032 }
9033 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9034 \begingroup
9035   \Hy@pstringdef\Hy@pstringF{#1}%
9036   \Hy@pstringdef\Hy@pstringP{#3}%
9037   \leavevmode
9038   \pdfstartlink
9039   attr{%
9040     \Hy@setpdfborder
9041     \Hy@setpdfhighlight
9042     \ifx\@runbordercolor\relax
9043     \else
9044     /C[\@runbordercolor]%
9045     \fi
9046   }%
9047   user {%
9048     /Subtype/Link%

```

```

9049 \ifHy@pdfa /F 4\fi
9050 /A<<%
9051 /F(\Hy@pstringF)%
9052 /S/Launch%
9053 \Hy@SetNewWindow
9054 \ifx\|#3\|%
9055 \else
9056 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9057 \fi
9058 \Hy@href@nextactionraw
9059 >>%
9060 }%
9061 \relax
9062 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9063 \close@pdflink
9064 \endgroup
9065 }

```

\PDF@SetupDox

```

9066 \def\PDF@SetupDoc{%
9067 \ifx\@pdfpagescrop\@empty
9068 \else
9069 \edef\process@me{%
9070 \pdfpagesattr=%
9071 /CropBox[\@pdfpagescrop]%
9072 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9073 \else
9074 ^^J\the\pdfpagesattr
9075 \fi
9076 }%
9077 }%
9078 \process@me
9079 \fi
9080 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9081 \pdfcatalog{%
9082 /PageMode/\@pdfpagemode
9083 \ifx\@baseurl\@empty
9084 \else
9085 /URI<</Base(\Hy@pstringB)>>%
9086 \fi
9087 }%
9088 \ifx\@pdfstartpage\@empty
9089 \else
9090 \ifx\@pdfstartview\@empty
9091 \else
9092 openaction goto page\@pdfstartpage{\@pdfstartview}%
9093 \fi
9094 \fi
9095 \edef\Hy@temp{%
9096 \ifHy@pdftoolbar\else /HideToolbar true\fi
9097 \ifHy@pdfmenubar\else /HideMenubar true\fi
9098 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9099 \ifHy@pdffitwindow /FitWindow true\fi
9100 \ifHy@pdfcenterwindow /CenterWindow true\fi

```

```

9101 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9102 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9103 \Hy@UseNameKey{Direction}\@pdfdirection
9104 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9105 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9106 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9107 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9108 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9109 \Hy@UseNameKey{Duplex}\@pdfduplex
9110 \ifx\@pdfpicktraybypdfsize\@empty
9111 \else
9112 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9113 \fi
9114 \ifx\@pdfprintpagerange\@empty
9115 \else
9116 /PrintPageRange[\@pdfprintpagerange]%
9117 \fi
9118 \ifx\@pdfnumcopies\@empty
9119 \else
9120 /NumCopies \@pdfnumcopies
9121 \fi
9122 }%
9123 \pdfcatalog{%
9124 \ifx\Hy@temp\@empty
9125 \else
9126 /ViewerPreferences<<\Hy@temp>>%
9127 \fi
9128 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9129 \ifx\@pdflang\relax
9130 \else
9131 /Lang(\@pdflang)%
9132 \fi
9133 }%
9134 }

```

\PDF@FinishDoc

```

9135 \def\PDF@FinishDoc{%
9136 \pdf@ifdraftmode{}{%
9137 \Hy@UseMaketitleInfos
9138 \HyInfo@GenerateAddons
9139 \pdfinfo{%
9140 /Author(\@pdfauthor)%
9141 /Title(\@pdftitle)%
9142 /Subject(\@pdfsubject)%
9143 /Creator(\@pdfcreator)%
9144 \ifx\@pdfcreationdate\@empty
9145 \else
9146 /CreationDate(\@pdfcreationdate)%
9147 \fi
9148 \ifx\@pdfmoddate\@empty
9149 \else
9150 /ModDate(\@pdfmoddate)%
9151 \fi
9152 \ifx\@pdfproducer\relax

```

```

9153 \else
9154 /Producer(\@pdfproducer)%
9155 \fi
9156 /Keywords(\@pdfkeywords)%
9157 \ifx\@pdftrapped\@empty
9158 \else
9159 /Trapped/\@pdftrapped
9160 \fi
9161 \HyInfo@Addons
9162 }%
9163 }%
9164 \Hy@DisableOption{pdfauthor}%
9165 \Hy@DisableOption{pdftitle}%
9166 \Hy@DisableOption{pdfsubject}%
9167 \Hy@DisableOption{pdfcreator}%
9168 \Hy@DisableOption{addtopdfcreator}%
9169 \Hy@DisableOption{pdfcreationdate}%
9170 \Hy@DisableOption{pdfmoddate}%
9171 \Hy@DisableOption{pdfproducer}%
9172 \Hy@DisableOption{pdfkeywords}%
9173 \Hy@DisableOption{pdftrapped}%
9174 \Hy@DisableOption{pdfinfo}%
9175 }

```

`\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`.

```

9176 \def\hyper@pagetransition{%
9177 \ifx\@pdfpagetransition\relax
9178 \else
9179 \expandafter\Hy@RemoveTransPageAttr
9180 \the\pdfpageattr^^J/Trans{}}>>\END
9181 \ifx\@pdfpagetransition\@empty
9182 \else
9183 \edef\@processme{%
9184 \global\pdfpageattr{%
9185 \the\pdfpageattr
9186 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9187 }%
9188 }%
9189 \@processme
9190 \fi
9191 \fi
9192 }

```

`\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.

```

9193 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9194 \ifx\#2\%
9195 \global\pdfpageattr{#1}%

```

```

9196 \else
9197   \Hy@RemoveTransPageAttr#1#4\END
9198 \fi
9199 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpage-` `duration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

9200 \def\hyper@pageduration{%
9201   \ifx\@pdfpageduration\relax
9202   \else
9203     \expandafter
9204     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9205     \ifx\@pdfpageduration\@empty
9206     \else
9207       \edef\@processme{%
9208         \global\pdfpageattr{%
9209           \the\pdfpageattr
9210             ^^J/Dur \@pdfpageduration\space
9211         }%
9212       }%
9213       \@processme
9214     \fi
9215   \fi
9216 }

```

`\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.

```

9217 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9218   \ifx\#2\%
9219     \global\pdfpageattr{#1}%
9220   \else
9221     \Hy@RemoveDurPageAttr#1#4\END
9222   \fi
9223 }

9224 \pdf@ifdraftmode{}{%
9225   \g@addto@macro\Hy@EveryPageHook{%
9226     \hyper@pagetransition
9227     \hyper@pageduration
9228   }%
9229 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

9230 </pdfTeX>
9231 <{*pdfTeX | xetex>
9232 \Hy@AtBeginDocument{%
9233   \ifHy@setpagesize
9234     \expandafter\@firstofone
9235   \else
9236     \expandafter\@gobble

```

```

9237 \fi
9238 {%
9239 \@ifclassloaded{seminar}{%
9240 (*pdfTeX)
9241 \setlength{\pdfhorigin}{1truein}%
9242 \setlength{\pdfvorigin}{1truein}%
9243 (/pdfTeX)
9244 \ifportrait
9245 \ifdim\paperwidth=\z@
9246 \else
9247 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9248 \fi
9249 \ifdim\paperheight=\z@
9250 \else
9251 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9252 \fi
9253 \else
9254 \ifdim\paperheight=\z@
9255 \else
9256 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9257 \fi
9258 \ifdim\paperwidth=\z@
9259 \else
9260 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9261 \fi
9262 \fi
9263 }{%
9264 \ifnum\mag=\@m
9265 \ifdim\stockwidth>\z@
9266 \ifdim\stockheight>\z@
9267 \setlength{\pdfpagewidth}{\stockwidth}%
9268 \setlength{\pdfpageheight}{\stockheight}%
9269 \else
9270 \ifdim\paperwidth>\z@
9271 \ifdim\paperheight>\z@
9272 \setlength{\pdfpagewidth}{\paperwidth}%
9273 \setlength{\pdfpageheight}{\paperheight}%
9274 \fi
9275 \fi
9276 \fi
9277 \else
9278 \ifdim\stockwidth=\z@
9279 \ifdim\paperwidth>\z@
9280 \ifdim\paperheight>\z@
9281 \setlength{\pdfpagewidth}{\paperwidth}%
9282 \setlength{\pdfpageheight}{\paperheight}%
9283 \fi
9284 \fi
9285 \fi
9286 \fi
9287 \fi
9288 }%
9289 }%
9290 \Hy@DisableOption{setpagesize}%

```

```

9291 }
9292 </pdfTeX | xetex>
9293 <*pdfTeX>
9294 \def\Acrobatmenu#1#2{%
9295   \Hy@Acrobatmenu{#1}{#2}{%
9296     \leavevmode
9297     \EdefEscapeName\Hy@temp@menu{#1}%
9298     \pdfstartlink
9299     attr{%
9300       \Hy@setpdfborder
9301       \Hy@setpdfhighlight
9302       \ifx\@menubordercolor\relax
9303       \else
9304       /C[\@menubordercolor]%
9305       \fi
9306     }%
9307     user{%
9308       /Subtype/Link%
9309       \ifHy@pdfa /F 4\fi
9310       /A<<%
9311       /S/Named%
9312       /N/\Hy@temp@menu
9313       \Hy@href@nextactionraw
9314       >>%
9315     }%
9316     \relax
9317     \Hy@colorlink\@menucolor#2%
9318     \close@pdflink
9319   }%
9320 }

```

43.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdf_T_EX'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 pdf_T_EX—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.

```

9321 </pdfTeX>

```

43.3 hypertex

The Hyper_T_EX 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 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.

```
9322 (*hypertex)
9323 \providecommand*\XR@ext}{dvi}
9324 \let\PDF@FinishDoc\ltx@empty
9325 \def\PDF@SetupDoc{%
9326   \ifx\@baseurl\@empty
9327   \else
9328     \special{html:<base href="\@baseurl">}}%
9329   \fi
9330 }
9331 \Hy@WrapperDef\hyper@anchor#1{%
9332   \Hy@SaveLastskip
9333   \Hy@VerboseAnchor{#1}%
9334   \begingroup
9335     \let\protect=\string
9336     \hyper@chars
9337     \special{html:<a name=%
9338       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
9339   \endgroup
9340   \Hy@Activeanchortrue
9341   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9342   \special{html:</a>}}%
9343   \Hy@Activeanchorfalse
9344   \Hy@RestoreLastskip
9345 }
9346 \Hy@WrapperDef\hyper@anchorstart#1{%
9347   \Hy@SaveLastskip
9348   \Hy@VerboseAnchor{#1}%
```



```

9349 \begingroup
9350 \hyper@chars
9351 \special{html:<a name=%
9352 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9353 \endgroup
9354 \Hy@activeanchortrue
9355 }
9356 \def\hyper@anchorend{%
9357 \special{html:</a>}%
9358 \Hy@activeanchorfalse
9359 \Hy@RestoreLastskip
9360 }
9361 \def\@urltype{url}
9362 \def\hyper@linkstart#1#2{%
9363 \Hy@VerboseLinkStart{#1}{#2}%
9364 \expandafter\Hy@colorlink\csname @#1color\endcsname
9365 \def\Hy@tempa{#1}%
9366 \ifx\Hy@tempa\@urltype
9367 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9368 \else
9369 \begingroup
9370 \hyper@chars
9371 \special{html:<a href=%
9372 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9373 \endgroup
9374 \fi
9375 }
9376 \def\hyper@linkend{%
9377 \special{html:</a>}%
9378 \Hy@endcolorlink
9379 }
9380 \def\hyper@linkfile#1#2#3{%
9381 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9382 }
9383 \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.

```

9384 \leavevmode
9385 \ifHy@raiselinks
9386 \Hy@SaveSpaceFactor
9387 \Hy@SaveSavedSpaceFactor
9388 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9389 \Hy@RestoreSavedSpaceFactor
9390 \@linkdim\dp\@tempboxa
9391 \lower\@linkdim\hbox{%
9392 \hyper@chars
9393 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9394 }%
9395 \Hy@colorlink\@urlcolor
9396 \Hy@RestoreSpaceFactor
9397 #1%
9398 \Hy@SaveSpaceFactor

```

```
9399 \@linkdim\ht\@tempboxa
```

Because of the interaction with the dvihps processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```
9400 \advance\@linkdim by -6.5\p@
9401 \raise\@linkdim\hbox{\special{html:</a>}}%
9402 \Hy@endcolorlink
9403 \Hy@RestoreSpaceFactor
9404 \else
9405 \begingroup
9406 \hyper@chars
9407 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9408 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9409 \special{html:</a>}%
9410 \Hy@endcolorlink
9411 \endgroup
9412 \fi
9413 }
```

Very poor implementation of `\hyper@link` without considering `#1`.

```
9414 \def\hyper@link#1#2#3{%
9415 \Hy@VerboseLinkStart{#1}{#2}%
9416 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
9417 }

9418 \def\hyper@image#1#2{%
9419 \begingroup
9420 \hyper@chars
9421 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9422 \endgroup
9423 }
9424 </hypertex>
9425 <*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.

```
9426 \providecommand*\XR@ext}{dvi}
9427 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9428 \Hy@WrapperDef\hyper@anchor#1{%
9429 \Hy@SaveLastskip
9430 \Hy@VerboseAnchor{#1}%
9431 \begingroup
```

```

9432 \let\protect=\string
9433 \special{mark: #1}%
9434 \endgroup
9435 \Hy@activeanchortrue
9436 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9437 \Hy@activeanchorfalse
9438 \Hy@RestoreLastskip
9439 }
9440 \Hy@WrapperDef\hyper@anchorstart#1{%
9441 \Hy@SaveLastskip
9442 \Hy@VerboseAnchor{#1}%
9443 \special{mark: #1}%
9444 \Hy@activeanchortrue
9445 }
9446 \def\hyper@anchorend{%
9447 \Hy@activeanchorfalse
9448 \Hy@RestoreLastskip
9449 }
9450 \def\hyper@linkstart#1#2{%
9451 \Hy@VerboseLinkStart{#1}{#2}%
9452 \expandafter\Hy@colorlink\csname @#1color\endcsname
9453 \special{button: %
9454 10000000 %
9455 \number\baselineskip\space
9456 #2%
9457 }%
9458 }
9459 \def\hyper@linkend{%
9460 \Hy@endcolorlink
9461 }
9462 \def\hyper@link#1#2#3{%
9463 \Hy@VerboseLinkStart{#1}{#2}%
9464 \leavevmode
9465 \ifHy@raiselinks
9466 \Hy@SaveSpaceFactor
9467 \Hy@SaveSavedSpaceFactor
9468 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9469 \Hy@RestoreSavedSpaceFactor
9470 \@linkdim\dp\@tempboxa
9471 \lower\@linkdim\hbox{%
9472 \special{button: %
9473 \number\wd\@tempboxa\space
9474 \number\ht\@tempboxa\space
9475 #2%
9476 }%
9477 \expandafter\Hy@colorlink\csname @#1color\endcsname
9478 \Hy@RestoreSpaceFactor
9479 #3\Hy@xspace@end
9480 \Hy@SaveSpaceFactor
9481 \Hy@endcolorlink
9482 }%
9483 \@linkdim\ht\@tempboxa
9484 \advance\@linkdim by -6.5\p@
9485 \raise\@linkdim\hbox{}}%

```

```

9486 \Hy@RestoreSpaceFactor
9487 \else
9488 \special{button: %
9489 \number\wd\@tempboxa\space
9490 \number\ht\@tempboxa\space
9491 #2%
9492 }%
9493 \expandafter\Hy@colorlink\csname @#1color\endcsname
9494 #3\Hy@xspace@end
9495 \Hy@endcolorlink
9496 \fi
9497 }
9498 \def\hyper@linkurl#1#2{%
9499 \begingroup
9500 \hyper@chars
9501 \leavevmode
9502 \ifHy@raiselinks
9503 \Hy@SaveSpaceFactor
9504 \Hy@SaveSavedSpaceFactor
9505 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9506 \Hy@RestoreSavedSpaceFactor
9507 \@linkdim\dp\@tempboxa
9508 \lower\@linkdim\hbox{%
9509 \special{button: %
9510 \number\wd\@tempboxa\space
9511 \number\ht\@tempboxa\space
9512 launch: \wwwbrowser\space
9513 #2%
9514 }%
9515 \Hy@colorlink\@urlcolor
9516 \Hy@RestoreSpaceFactor
9517 #1\Hy@xspace@end
9518 \Hy@SaveSpaceFactor
9519 \Hy@endcolorlink
9520 }%
9521 \@linkdim\ht\@tempboxa
9522 \advance\@linkdim by -6.5\p@
9523 \raise\@linkdim\hbox{}}%
9524 \Hy@RestoreSpaceFactor
9525 \else
9526 \special{button: %
9527 \number\wd\@tempboxa\space
9528 \number\ht\@tempboxa\space
9529 launch: \wwwbrowser\space
9530 #2%
9531 }%
9532 \Hy@colorlink\@urlcolor
9533 #1\Hy@xspace@end
9534 \Hy@endcolorlink
9535 \fi
9536 \endgroup
9537 }
9538 \def\hyper@linkfile#1#2#3{%
9539 \begingroup

```

```

9540 \hyper@chars
9541 \leavevmode
9542 \ifHy@raiselinks
9543 \Hy@SaveSpaceFactor
9544 \Hy@SaveSavedSpaceFactor
9545 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9546 \Hy@RestoreSavedSpaceFactor
9547 \@linkdim\dp\@tempboxa
9548 \lower\@linkdim\hbox{%
9549 \special{button: %
9550 \number\wd\@tempboxa\space
9551 \number\ht\@tempboxa\space
9552 #3,%
9553 file: #2%
9554 }%
9555 \Hy@colorlink\@filecolor
9556 \Hy@RestoreSpaceFactor
9557 #1\Hy@xspace@end
9558 \Hy@SaveSpaceFactor
9559 \Hy@endcolorlink
9560 }%
9561 \@linkdim\ht\@tempboxa
9562 \advance\@linkdim by -6.5\p@
9563 \raise\@linkdim\hbox{}}%
9564 \Hy@RestoreSpaceFactor
9565 \else
9566 \special{button: %
9567 \number\wd\@tempboxa\space
9568 \number\ht\@tempboxa\space
9569 #3,%
9570 file: #2%
9571 }%
9572 \Hy@colorlink\@filecolor
9573 #1\Hy@xspace@end
9574 \Hy@endcolorlink
9575 \fi
9576 \endgroup
9577 }
9578 \HyInfo@AddonUnsupportedtrue
9579 \def\PDF@FinishDoc{%
9580 \Hy@UseMaketitleInfos
9581 \HyInfo@TrappedUnsupported
9582 \special{PDF: Keywords \@pdfkeywords}%
9583 \special{PDF: Title \@pdftitle}%
9584 \special{PDF: Creator \@pdfcreator}%
9585 \ifx\@pdfcreationdate\@empty
9586 \else
9587 \special{PDF: CreationDate \@pdfcreationdate}%
9588 \fi
9589 \ifx\@pdfmoddate\@empty
9590 \else
9591 \special{PDF: ModDate \@pdfmoddate}%
9592 \fi
9593 \special{PDF: Author \@pdfauthor}%

```

```

9594 \ifx\@pdfproducer\relax
9595 \else
9596 \special{PDF: Producer \@pdfproducer}%
9597 \fi
9598 \special{PDF: Subject \@pdfsubject}%
9599 \Hy@DisableOption{pdfauthor}%
9600 \Hy@DisableOption{pdftitle}%
9601 \Hy@DisableOption{pdfsubject}%
9602 \Hy@DisableOption{pdfcreator}%
9603 \Hy@DisableOption{addtopdfcreator}%
9604 \Hy@DisableOption{pdfcreationdate}%
9605 \Hy@DisableOption{pdfcreationdate}%
9606 \Hy@DisableOption{pdfmoddate}%
9607 \Hy@DisableOption{pdfproducer}%
9608 \Hy@DisableOption{pdfkeywords}%
9609 \Hy@DisableOption{pdftrapped}%
9610 \Hy@DisableOption{pdfinfo}%
9611 }
9612 \def\PDF@SetupDoc{%
9613 \ifx\@baseurl\@empty
9614 \else
9615 \special{PDF: Base \@baseurl}%
9616 \fi
9617 \ifx\@pdfpagescrop\@empty\else
9618 \special{PDF: BBox \@pdfpagescrop}%
9619 \fi
9620 \def\Hy@temp{}%
9621 \ifx\@pdfstartpage\@empty
9622 \else
9623 \ifx\@pdfstartview\@empty
9624 \else
9625 \edef\Hy@temp{%
9626 ,Page=\@pdfstartpage
9627 ,View=\@pdfstartview
9628 }%
9629 \fi
9630 \fi
9631 \edef\Hy@temp{%
9632 \noexpand\pdfmark{%
9633 pdfmark=/DOCVIEW,%
9634 PageMode=/\@pdfpagemode
9635 \Hy@temp
9636 }%
9637 }%
9638 \Hy@temp
9639 \ifx\@pdfpagescrop\@empty
9640 \else
9641 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9642 \fi
9643 \edef\Hy@temp{%
9644 \ifHy@pdftoolbar\else /HideToolbar true\fi
9645 \ifHy@pdfmenubar\else /HideMenubar true\fi
9646 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9647 \ifHy@pdfwindow /FitWindow true\fi

```

```

9648 \ifHy@pdfcenterwindow /CenterWindow true\fi
9649 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9650 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9651 \Hy@UseNameKey{Direction}\@pdfdirection
9652 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9653 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9654 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9655 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9656 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9657 \Hy@UseNameKey{Duplex}\@pdfduplex
9658 \ifx\@pdfpicktraybypdfsize\@empty
9659 \else
9660 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9661 \fi
9662 \ifx\@pdfprintpagerange\@empty
9663 \else
9664 /PrintPageRange[\@pdfprintpagerange]%
9665 \fi
9666 \ifx\@pdfnumcopies\@empty
9667 \else
9668 /NumCopies \@pdfnumcopies
9669 \fi
9670 }%
9671 \pdfmark{pdfmark=/PUT,%
9672 Raw={%
9673 \string{Catalog\string}<<%
9674 \ifx\Hy@temp\@empty
9675 \else
9676 /ViewerPreferences<<\Hy@temp>>%
9677 \fi
9678 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9679 \ifx\@pdflang\relax
9680 \else
9681 /Lang(\@pdflang)%
9682 \fi
9683 >>%
9684 }%
9685 }%
9686 }
9687 </dviwindo>
9688 <*\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.

```

9689 \special{dvipdfmx:config C 0x0010}
9690 \providecommand*\XR@ext}{pdf}
9691 \Hy@setbreaklinks{true}
9692 \def\HyPat@ObjRef{%
9693 @[\^ ]+>

```

```

9694 }
9695 \newsavebox{\pdfm@box}
9696 \def\@pdfm@mark#1{\special{pdf:#1}}
9697 \Hy@WrapperDef\@pdfm@dest#1{%
9698   \Hy@SaveLastskip
9699   \Hy@VerboseAnchor{#1}%
9700   \begin{group}
9701     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9702     \def\x{XYZ}%
9703     \ifx\x\@pdfview
9704       \def\x{XYZ @xpos @ypos null}%
9705     \else
9706       \def\x{FitH}%
9707       \ifx\x\@pdfview
9708         \def\x{FitH @ypos}%
9709       \else
9710         \def\x{FitBH}%
9711         \ifx\x\@pdfview
9712           \def\x{FitBH @ypos}%
9713         \else
9714           \def\x{FitV}%
9715           \ifx\x\@pdfview
9716             \def\x{FitV @xpos}%
9717           \else
9718             \def\x{FitBV}%
9719             \ifx\x\@pdfview
9720               \def\x{FitBV @xpos}%
9721             \else
9722               \def\x{Fit}%
9723               \ifx\x\@pdfview
9724                 \let\x\@pdfview
9725               \else
9726                 \def\x{FitB}%
9727                 \ifx\x\@pdfview
9728                   \let\x\@pdfview
9729                 \else
9730                   \def\x{FitR}%
9731                   \ifx\x\@pdfview
9732                     \Hy@Warning{\`pdfview=FitR' is not supported}%
9733                     \def\x{XYZ @xpos @ypos null}%
9734                   \else
9735                     \@onelevel@sanitize\@pdfview
9736                     \Hy@Warning{%
9737                       Unknown value ` \@pdfview' for pdfview%
9738                     }%
9739                     \def\x{XYZ @xpos @ypos null}%
9740                   \fi
9741                 \fi
9742               \fi
9743             \fi
9744           \fi
9745         \fi
9746       \fi
9747     \fi

```



```

9748 \pdfmark{dest (\Hy@pstringDest) [@thispage /\x]}%
9749 \endgroup
9750 \Hy@RestoreLastskip
9751 }
9752 \providecommand*\pdfview{XYZ}
9753 \providecommand*\pdfborder{0 0 1}
9754 \providecommand*\pdfborderstyle{}
9755 \def\hyper@anchor#1{%
9756 \pdfmarkdest{#1}%
9757 }
9758 \def\hyper@anchorstart#1{%
9759 \Hy@activeanchortrue
9760 \pdfmarkdest{#1}%
9761 }
9762 \def\hyper@anchorend{%
9763 \Hy@activeanchorfalse
9764 }

9765 \newcounter{Hy@AnnotLevel}

9766 \ifHy@ocgcolorlinks
9767 \def\OBJ@OCG@view{@OCG@view}%
9768 \pdfmark{%
9769 obj \OBJ@OCG@view <<%
9770 /Type/OCG%
9771 /Name(View)%
9772 /Usage<<%
9773 /Print<<%
9774 /PrintState/OFF%
9775 >>%
9776 /View<<%
9777 /ViewState/ON%
9778 >>%
9779 >>%
9780 >>%
9781 }%
9782 \pdfmark{close \OBJ@OCG@view}%
9783 \def\OBJ@OCG@print{@OCG@print}%
9784 \pdfmark{%
9785 obj \OBJ@OCG@print <<%
9786 /Type/OCG%
9787 /Name(Print)%
9788 /Usage<<%
9789 /Print<<%
9790 /PrintState/ON%
9791 >>%
9792 /View<<%
9793 /ViewState/OFF%
9794 >>%
9795 >>%
9796 >>%
9797 }%
9798 \pdfmark{close \OBJ@OCG@print}%
9799 \def\OBJ@OCGs{@OCGs}%
9800 \pdfmark{%

```

```

9801   obj \OBJ@OCGs [%
9802     \OBJ@OCG@view\space\OBJ@OCG@print
9803   ]%
9804 }%
9805 \@pdfm@mark{close \OBJ@OCGs}%
9806 \@pdfm@mark{%
9807   put @catalog <<%
9808     /OCProperties<<%
9809     /OCGs \OBJ@OCGs
9810     /D<<%
9811     /OFF[\OBJ@OCG@print]%
9812     /AS[%
9813       <<%
9814         /Event/View%
9815         /OCGs \OBJ@OCGs
9816         /Category[/View]%
9817       >>%
9818       <<%
9819         /Event/Print%
9820         /OCGs \OBJ@OCGs
9821         /Category[/Print]%
9822       >>%
9823       <<%
9824         /Event/Export%
9825         /OCGs \OBJ@OCGs
9826         /Category[/Print]%
9827       >>%
9828     ]%
9829     >>%
9830   >>%
9831 >>%
9832 }%
9833 \AtBeginShipout{%
9834   \setbox\AtBeginShipoutBox=\hbox{%
9835     \copy\AtBeginShipoutBox
9836     \@pdfm@mark{%
9837       put @resources <<%
9838         /Properties<<%
9839         /OCView \OBJ@OCG@view
9840         /OCPrint \OBJ@OCG@print
9841       >>%
9842     >>%
9843   }%
9844 }%
9845 }%
9846 \Hy@AtBeginDocument{%
9847   \def\Hy@colorlink#1{%
9848     \begingroup
9849     \ifHy@ocgcolorlinks
9850       \def\Hy@ocgcolor{#1}%
9851       \setbox0=\hbox\bgroup\color@begingroup
9852     \else
9853       \HyColor@UseColor#1%
9854     \fi

```

```

9855 }%
9856 \def\Hy@endcolorlink{%
9857   \ifHy@ocgcolorlinks
9858     \color@endgroup\egroup
9859     \mbox{%
9860       \@pdfm@mark{content /OC/OCPrint BDC}%
9861       \rlap{\copy0}%
9862       \@pdfm@mark{content EMC/OC/OCView BDC}%
9863       \begingroup
9864         \expandafter\HyColor@UseColor\Hy@ocgcolor
9865         \box0 %
9866       \endgroup
9867       \@pdfm@mark{content EMC}%
9868     }%
9869   \fi
9870 \endgroup
9871 }%
9872 }%
9873 \else
9874 \Hy@DisableOption{ocgcolorlinks}%
9875 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining \stepcounter (github issue/13)

```

9876 \def\Hy@BeginAnnot#1{%
9877   \global\advance\c@Hy@AnnotLevel\@ne
9878   \ifnum\c@Hy@AnnotLevel=\@ne
9879     #1%
9880   \fi
9881 }
9882 \def\Hy@endAnnot{%
9883   \ifnum\value{Hy@AnnotLevel}=\@ne
9884     \Hy@endcolorlink
9885     \@pdfm@mark{eann}%
9886   \fi
9887   \global\advance\c@Hy@AnnotLevel\m@ne
9888 }
9889 \def\Hy@undefinedname{UNDEFINED}
9890 \def\hyper@linkstart#1#2{%
9891   \Hy@VerboseLinkStart{#1}{#2}%
9892   \leavevmode
9893   \Hy@BeginAnnot{%
9894     \protected@edef\Hy@testname{#2}%
9895     \ifx\Hy@testname\@empty
9896       \Hy@Warning{%
9897         Empty destination name,\MessageBreak
9898         using ``\Hy@undefinedname'%
9899       }%
9900     \let\Hy@testname\Hy@undefinedname
9901   \else
9902     \Hy@pstringdef\Hy@testname{%
9903       \expandafter\HyperDestNameFilter\expandafter{%
9904         \Hy@testname
9905       }%

```

```

9906 }%
9907 \fi
9908 \@pdfm@mark{%
9909   bann<<%
9910     /Type/Annot%
9911     /Subtype/Link%
9912     \ifHy@pdfa /F 4\fi
9913     \Hy@setpdfborder
9914     \Hy@setpdfhighlight
9915     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9916     \else
9917       /C[\csname @#1bordercolor\endcsname]%
9918     \fi
9919     /A<<%
9920     /S/GoTo%
9921     /D(\Hy@testname)%
9922     \Hy@href@nextactionraw
9923     >>%
9924   >>%
9925 }%
9926 \expandafter\Hy@colorlink\csname @#1color\endcsname
9927 }%
9928 }
9929 \def\hyper@linkend{\Hy@EndAnnot}%
9930 \def\hyper@link#1#2#3{%
9931   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
9932 }
9933 \def\hyper@linkfile#1#2#3{%
9934   \leavevmode
9935   \Hy@BeginAnnot{%
9936     \def\Hy@pstringF{#2}%
9937     \Hy@CleanupFile\Hy@pstringF
9938     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9939     \Hy@pstringdef\Hy@pstringD{#3}%
9940     \Hy@MakeRemoteAction
9941     \@pdfm@mark{%
9942       bann<<%
9943         /Type/Annot%
9944         /Subtype/Link%
9945         \ifHy@pdfa /F 4\fi
9946         \Hy@setpdfborder
9947         \Hy@setpdfhighlight
9948         \ifx\@filebordercolor\relax
9949         \else
9950           /C[\@filebordercolor]%
9951         \fi
9952         /A<<%
9953         /S/GoToR%
9954         /F(\Hy@pstringF)%
9955         /D%
9956         \ifx\@#3\%
9957           [\Hy@href@page\@pdfremotestartview]%
9958         \else
9959           (\Hy@pstringD)%

```

```

9960      \fi
9961      \Hy@SetNewWindow
9962      \Hy@href@nextactionraw
9963      >>%
9964      >>%
9965      }%
9966      \Hy@colorlink\@filecolor
9967      }%
9968      #1\Hy@xspace@end
9969      \Hy@EndAnnot
9970  }
9971  \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
9972  \leavevmode
9973  \Hy@BeginAnnot{%
9974  \Hy@pstringdef\Hy@pstringF{#1}%
9975  \Hy@pstringdef\Hy@pstringP{#3}%
9976  \@pdfm@mark{%
9977  bann<<%
9978  /Type/Annot%
9979  /Subtype/Link%
9980  \ifHy@pdfa /F 4\fi
9981  \Hy@setpdfborder
9982  \Hy@setpdfhighlight
9983  \ifx\@runbordercolor\relax
9984  \else
9985  /C[\@runbordercolor]%
9986  \fi
9987  /A<<%
9988  /F(\Hy@pstringF)%
9989  /S/Launch%
9990  \Hy@SetNewWindow
9991  \ifx\|#3\|
9992  \else
9993  /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9994  \fi
9995  \Hy@href@nextactionraw
9996  >>%
9997  >>%
9998  }%
9999  \Hy@colorlink\@runcolor
10000 }%
10001 #2\Hy@xspace@end
10002 \Hy@EndAnnot
10003 }
10004 \def\hyper@linkurl#1#2{%
10005 \leavevmode
10006 \Hy@BeginAnnot{%
10007 \Hy@pstringdef\Hy@pstringURI{#2}%
10008 \@pdfm@mark{%
10009 bann<<%
10010 /Type/Annot%
10011 /Subtype/Link%
10012 \ifHy@pdfa /F 4\fi
10013 \Hy@setpdfborder

```

```

10014 \Hy@setpdfhighlight
10015 \ifx\@urlbordercolor\relax
10016 \else
10017 /C[\@urlbordercolor]%
10018 \fi
10019 /A<<%
10020 /S/URI%
10021 /URI(\Hy@pstringURI)%
10022 \ifHy@href@ismap
10023 /IsMap true%
10024 \fi
10025 \Hy@href@nextactionraw
10026 >>%
10027 >>%
10028 }%
10029 \Hy@colorlink\@urlcolor
10030 }%
10031 #1\Hy@xspace@end
10032 \Hy@EndAnnot
10033 }
10034 \def\Acrobatmenu#1#2{%
10035 \Hy@Acrobatmenu{#1}{#2}{%
10036 \Hy@BeginAnnot{%
10037 \EdefEscapeName\Hy@temp@menu{#1}%
10038 \@pdfm@mark{%
10039 bann<<%
10040 /Type/Annot%
10041 /Subtype/Link%
10042 \ifHy@pdfa /F 4\fi
10043 \Hy@setpdfborder
10044 \Hy@setpdfhighlight
10045 \ifx\@menubordercolor\relax
10046 \else
10047 /C[\@menubordercolor]%
10048 \fi
10049 /A<<%
10050 /S/Named%
10051 /N/\Hy@temp@menu
10052 \Hy@href@nextactionraw
10053 >>%
10054 >>%
10055 }%
10056 \Hy@colorlink\@menucolor
10057 }%
10058 #2\Hy@xspace@end
10059 \Hy@EndAnnot
10060 }%
10061 }
10062
10063 \def\PDF@FinishDoc{%
10064 \Hy@UseMaketitleInfos
10065 \Hy@Info@GenerateAddons
10066 \@pdfm@mark{%
10067 docinfo<<%

```

```

10068 /Title(\@pdftitle)%
10069 /Subject(\@pdfsubject)%
10070 /Creator(\@pdfcreator)%
10071 \ifx\@pdfcreationdate\@empty
10072 \else
10073 /CreationDate(\@pdfcreationdate)%
10074 \fi
10075 \ifx\@pdfmoddate\@empty
10076 \else
10077 /ModDate(\@pdfmoddate)%
10078 \fi
10079 /Author(\@pdfauthor)%
10080 \ifx\@pdfproducer\relax
10081 \else
10082 /Producer(\@pdfproducer)%
10083 \fi
10084 /Keywords(\@pdfkeywords)%
10085 \ifx\@pdftrapped\@empty
10086 \else
10087 /Trapped/\@pdftrapped
10088 \fi
10089 \HyInfo@Addons
10090 >>%
10091 }%
10092 \Hy@DisableOption{pdfauthor}%
10093 \Hy@DisableOption{pdftitle}%
10094 \Hy@DisableOption{pdfsubject}%
10095 \Hy@DisableOption{pdfcreator}%
10096 \Hy@DisableOption{addtopdfcreator}%
10097 \Hy@DisableOption{pdfcreationdate}%
10098 \Hy@DisableOption{pdfcreationdate}%
10099 \Hy@DisableOption{pdfmoddate}%
10100 \Hy@DisableOption{pdfproducer}%
10101 \Hy@DisableOption{pdfkeywords}%
10102 \Hy@DisableOption{pdftrapped}%
10103 \Hy@DisableOption{pdfinfo}%
10104 }
10105 \def\PDF@SetupDoc{%
10106 \edef\Hy@temp{%
10107 \ifHy@pdftoolbar\else /HideToolbar true\fi
10108 \ifHy@pdfmenubar\else /HideMenubar true\fi
10109 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10110 \ifHy@pdfwindow /FitWindow true\fi
10111 \ifHy@pdfcenterwindow /CenterWindow true\fi
10112 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10113 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10114 \Hy@UseNameKey{Direction}\@pdfdirection
10115 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10116 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10117 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10118 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10119 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10120 \Hy@UseNameKey{Duplex}\@pdfduplex
10121 \ifx\@pdfpicktraybypdfsize\@empty

```

```

10122 \else
10123 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10124 \fi
10125 \ifx\@pdfprintpagerange\@empty
10126 \else
10127 /PrintPageRange[\@pdfprintpagerange]%
10128 \fi
10129 \ifx\@pdfnumcopies\@empty
10130 \else
10131 /NumCopies \@pdfnumcopies
10132 \fi
10133 }%
10134 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10135 \@pdfm@mark{%
10136 docview<<%
10137 \ifx\@pdfstartpage\@empty
10138 \else
10139 \ifx\@pdfstartview\@empty
10140 \else
10141 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10142 \fi
10143 \fi
10144 \ifx\@baseurl\@empty
10145 \else
10146 /URI<</Base(\Hy@pstringB)>>%
10147 \fi
10148 /PageMode/\@pdfpagemode
10149 \ifx\Hy@temp\@empty
10150 \else
10151 /ViewerPreferences<<\Hy@temp>>%
10152 \fi
10153 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10154 \ifx\@pdflang\relax
10155 \else
10156 /Lang(\@pdflang)%
10157 \fi
10158 >>%
10159 }%
10160 \ifx\@pdfpagescrop\@empty
10161 \else
10162 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10163 \fi
10164 }
10165 </dvipdfm | xetex>
10166 <*dvipdfm | xetex>

```

\hyper@pagetransition

```

10167 \def\hyper@pagetransition{%
10168 \ifx\@pdfpagetransition\relax
10169 \else
10170 \ifx\@pdfpagetransition\@empty
10171 \else
10172 \special{pdf:put @thispage %
10173 <</Trans<</S/\@pdfpagetransition>>>>%

```



```

10174     }%
10175     \fi
10176     \fi
10177 }

```

\hyper@pageduration

```

10178 \def\hyper@pageduration{%
10179   \ifx\@pdfpageduration\relax
10180   \else
10181     \ifx\@pdfpageduration\@empty
10182     \else
10183       \special{pdf:put @thispage %
10184         <</Dur \@pdfpageduration>>%
10185       }%
10186     \fi
10187   \fi
10188 }

10189 \g@addto@macro\Hy@EveryPageBoxHook{%
10190   \hyper@pagetransition
10191   \hyper@pageduration
10192 }

10193 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method \pdfpagewidth and \pdfpageheight for setting the paper size.

```

10194 <*dvipdfm>
10195 \AtBeginShipoutFirst{%
10196   \ifHy@setpagesize
10197     \begingroup
10198     \ifnum\mag=\@m
10199       \ifdim\stockwidth>\z@
10200       \ifdim\stockheight>\z@
10201         \special{papersize=\the\stockwidth,\the\stockheight}%
10202       \else
10203         \ifdim\paperwidth>\z@
10204         \ifdim\paperheight>\z@
10205           \special{papersize=\the\paperwidth,\the\paperheight}%
10206         \fi
10207       \fi
10208     \fi
10209   \else
10210     \ifdim\stockwidth=\z@
10211     \ifdim\paperwidth>\z@
10212     \ifdim\paperheight>\z@
10213       \special{papersize=\the\paperwidth,\the\paperheight}%
10214     \fi
10215   \fi
10216 \fi
10217 \fi
10218 \fi
10219 \endgroup
10220 \fi
10221 \Hy@DisableOption{setpagesize}%

```

```

10222 }
10223 </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.

```

10224 <*vtexhtml>
10225 \providecommand*{\XR@ext}{htm}
10226 \RequirePackage{vtexhtml}
10227 \newif\if@Localurl
10228 \let\PDF@FinishDoc\ltx@empty
10229 \def\PDF@SetupDoc{%
10230   \ifx\@baseurl\@empty
10231   \else
10232     \special{!direct <base href="\@baseurl">}%
10233   \fi
10234 }
10235 \def\@urltype{url}
10236 \def\hyper@link#1#2#3{%
10237   \Hy@VerboseLinkStart{#1}{#2}%
10238   \leavevmode
10239   \special{!direct <a href=%
10240     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10241   #3\Hy@xspace@end
10242   \special{!direct </a>}%
10243 }
10244 \def\hyper@linkurl#1#2{%
10245   \begingroup
10246     \hyper@chars
10247     \leavevmode
10248     \MathBSuppress=1\relax
10249     \special{!direct <a href=%
10250       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10251     #1\Hy@xspace@end
10252     \MathBSuppress=0\relax
10253     \special{!direct </a>}%
10254   \endgroup
10255 }
10256 \def\hyper@linkfile#1#2#3{%
10257   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\#3\else\#3\fi}%
10258 }
10259 \def\hyper@linkstart#1#2{%
10260   \Hy@VerboseLinkStart{#1}{#2}%
10261   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
10262     \@Localurltrue
10263     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10264   \else
10265     \@Localurlfalse
10266   \begingroup
10267     \hyper@chars
10268     \special{!aref \HyperDestNameFilter{#2}}%
10269   \endgroup
10270   \fi

```

```

10271 }
10272 \def\hyper@linkend{%
10273   \if@Localurl
10274     \special{!endaref}%
10275   \else
10276     \special{!direct </a>}%
10277   \fi
10278 }
10279 \Hy@WrapperDef\hyper@anchorstart#1{%
10280   \Hy@SaveLastskip
10281   \Hy@VerboseAnchor{#1}%
10282   \begingroup
10283     \hyper@chars
10284     \special{!aname #1}%
10285     \special{!direct <a name=%
10286       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10287   \endgroup
10288   \Hy@activeanchortrue
10289 }
10290 \def\hyper@anchorend{%
10291   \special{!direct </a>}%
10292   \Hy@activeanchorfalse
10293   \Hy@RestoreLastskip
10294 }
10295 \Hy@WrapperDef\hyper@anchor#1{%
10296   \Hy@SaveLastskip
10297   \Hy@VerboseAnchor{#1}%
10298   \begingroup
10299     \let\protect=\string
10300     \hyper@chars
10301     \leavevmode
10302     \special{!aname #1}%
10303     \special{!direct <a name=%
10304       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10305   \endgroup
10306   \Hy@activeanchortrue
10307   \bgroup\anchor@spot\egroup
10308   \special{!direct </a>}%
10309   \Hy@activeanchorfalse
10310   \Hy@RestoreLastskip
10311 }
10312 \def\@Form[#1]{%
10313   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10314 }
10315 \let\@endForm\ltx@empty
10316 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10317   \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10318 }
10319 \def\@TextField[#1]#2{% parameters, label
10320   \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10321 }
10322 \def\@CheckBox[#1]#2{% parameters, label
10323   \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10324 }

```

```

10325 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10326 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10327 }
10328 \def\@PushButton[#1]#2{% parameters, label
10329 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10330 }
10331 \def\@Reset[#1]#2{%
10332 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10333 }
10334 \def\@Submit[#1]#2{%
10335 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10336 }
10337 \</vtexhtml>
10338 \<vtex>

```

VTeX version 6.68 supports `\mediawidth` and `\mediaheight`. The `\ifx` construct is better than a `\csname`, because it avoids the definition and the hash table entry of a previous undefined macro.

```

10339 \ifcsname mediaheight\endcsname
10340 \ifHy@setpagesize
10341 \providecommand*\VTeXInitMediaSize{%
10342 \ifnum\mag=\@m
10343 \ifdim\stockwidth>\z@
10344 \ifdim\stockheight>\z@
10345 \setlength\mediaheight\stockheight
10346 \setlength\mediawidth\stockwidth
10347 \else
10348 \ifdim\paperwidth>\z@
10349 \ifdim\paperheight>\z@
10350 \setlength\mediaheight\paperheight
10351 \setlength\mediawidth\paperwidth
10352 \fi
10353 \fi
10354 \fi
10355 \else
10356 \ifdim\stockwidth=\z@
10357 \ifdim\paperwidth>\z@
10358 \ifdim\paperheight>\z@
10359 \setlength\mediaheight\paperheight
10360 \setlength\mediawidth\paperwidth
10361 \fi
10362 \fi
10363 \fi
10364 \fi
10365 \fi
10366 }%
10367 \Hy@AtBeginDocument*\VTeXInitMediaSize}%
10368 \fi
10369 \Hy@DisableOption{setpagesize}%
10370 \fi

```

Older versions of VTeX require `xyz` in lower case.

```

10371 \providecommand*\@pdfview{xyz}
10372 \providecommand*\@pdfborder{0 0 1}

```

```

10373 \providecommand*\@pdfborderstyle{}
10374 \let\CurrentBorderColor\@linkbordercolor
10375 \Hy@WrapperDef\hyper@anchor#1{%
10376   \Hy@SaveLastskip
10377   \Hy@VerboseAnchor{#1}%
10378   \begingroup
10379     \let\protect=\string
10380     \hyper@chars
10381     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10382   \endgroup
10383   \Hy@activeanchortrue
10384   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10385   \Hy@activeanchorfalse
10386   \Hy@RestoreLastskip
10387 }
10388 \Hy@WrapperDef\hyper@anchorstart#1{%
10389   \Hy@SaveLastskip
10390   \Hy@VerboseAnchor{#1}%
10391   \begingroup
10392     \hyper@chars
10393     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10394   \endgroup
10395   \Hy@activeanchortrue
10396 }
10397 \def\hyper@anchorend{%
10398   \Hy@activeanchorfalse
10399   \Hy@RestoreLastskip
10400 }
10401 \def\@urltype{url}
10402 \def\Hy@undefinedname{UNDEFINED}
10403 \def\hyper@linkstart#1#2{%
10404   \Hy@VerboseLinkStart{#1}{#2}%
10405   \Hy@pstringdef\Hy@pstringURI{#2}%
10406   \expandafter\Hy@colorlink\csname @#1color\endcsname
10407   \ltx@ifundefined{#1bordercolor}{%
10408     \let\CurrentBorderColor\relax
10409   }{%
10410     \edef\CurrentBorderColor{%
10411       \csname @#1bordercolor\endcsname
10412     }%
10413   }%
10414   \def\Hy@tempa{#1}%
10415   \ifx\Hy@tempa\@urltype
10416     \special{!%
10417       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10418       \ifHy@href@ismap
10419         /IsMap true%
10420       \fi
10421       \Hy@href@nextactionraw
10422       >;%
10423       a=<%
10424       \ifHy@pdfa /F 4\fi
10425       \Hy@setpdfborder
10426       \ifx\CurrentBorderColor\relax

```

```

10427     \else
10428         /C [\CurrentBorderColor]%
10429     \fi
10430     >%
10431     }%
10432 \else
10433     \protected@edef\Hy@testname{#2}%
10434     \ifx\Hy@testname\@empty
10435         \Hy@Warning{%
10436             Empty destination name,\MessageBreak
10437             using `\'Hy@undefinedname'%
10438         }%
10439     \let\Hy@testname\Hy@undefinedname
10440     \fi
10441     \special{!%
10442         aref \expandafter\HyperDestNameFilter
10443             \expandafter{\Hy@testname};%
10444         a=<%
10445             \ifHy@pdfa /F 4\fi
10446             \Hy@setpdfborder
10447             \ifx\CurrentBorderColor\relax
10448                 \else
10449                     /C [\CurrentBorderColor]%
10450                 \fi
10451             >%
10452             }%
10453     \fi
10454 }
10455 \def\hyper@linkend{%
10456     \special{!endaref}%
10457     \Hy@endcolorlink
10458 }
10459 \def\hyper@linkfile#1#2#3{%
10460     \leavevmode
10461     \def\Hy@pstringF{#2}%
10462     \Hy@CleanupFile\Hy@pstringF
10463     \special{!%
10464         aref <%
10465             \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
10466             f=\Hy@pstringF>#3;%
10467             a=<%
10468                 \ifHy@pdfa /F 4\fi
10469                 \Hy@setpdfborder
10470                 \ifx\@filebordercolor\relax
10471                     \else
10472                         /C [\@filebordercolor]%
10473                     \fi
10474                 >%
10475             }%
10476             \Hy@colorlink\@filecolor
10477             #1\Hy@xspace@end
10478             \Hy@endcolorlink
10479             \special{!endaref}%
10480     }

```

```

10481 \def\hyper@linkurl#1#2{%
10482   \begingroup
10483   \Hy@pstringdef\Hy@pstringURI{#2}%
10484   \hyper@chars
10485   \leavevmode
10486   \special{!%
10487     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10488     \ifHy@href@ismap
10489       /IsMap true%
10490     \fi
10491     \Hy@href@nextactionraw
10492     >,%
10493     a=<%
10494     \ifHy@pdfa /F 4\fi
10495     \Hy@setpdfborder
10496     \ifx\@urlbordercolor\relax
10497     \else
10498       /C [\@urlbordercolor]%
10499     \fi
10500     >%
10501   }%
10502   \Hy@colorlink\@urlcolor
10503   #1\Hy@xspace@end
10504   \Hy@endcolorlink
10505   \special{!endaref}%
10506 \endgroup
10507 }
10508 \def\hyper@link#1#2#3{%
10509   \Hy@VerboseLinkStart{#1}{#2}%
10510   \ltx@ifundefined{@#1bordercolor}{%
10511     \let\CurrentBorderColor\relax
10512   }{%
10513     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
10514   }%
10515   \leavevmode
10516   \protected@edef\Hy@testname{#2}%
10517   \ifx\Hy@testname\@empty
10518     \Hy@Warning{%
10519       Empty destination name,\MessageBreak
10520       using ``\Hy@undefinedname'%
10521     }%
10522     \let\Hy@testname\Hy@undefinedname
10523   \fi
10524   \special{!%
10525     aref \expandafter\HyperDestNameFilter
10526     \expandafter{\Hy@testname};%
10527     a=<%
10528     \ifHy@pdfa /F 4\fi
10529     \Hy@setpdfborder
10530     \ifx\CurrentBorderColor\relax
10531     \else
10532       /C [\CurrentBorderColor]%
10533     \fi
10534     >%

```

```

10535 }%
10536 \expandafter
10537 \Hy@colorlink\csname @#1color\endcsname
10538   #3\Hy@xspace@end
10539 \Hy@endcolorlink
10540 \special{!endaref}%
10541 }
10542 \def\hyper@image#1#2{%
10543 \hyper@linkurl{#2}{#1}%
10544 }
10545 \def\@hyper@launch run:#1\#2#3{%
10546 \Hy@pstringdef\Hy@pstringF{#1}%
10547 \Hy@pstringdef\Hy@pstringP{#3}%
10548 \leavevmode
10549 \special{!aref %
10550 <u=%
10551 /Type/Action%
10552 /S/Launch%
10553 /F(\Hy@pstringF)%
10554 \Hy@SetNewWindow
10555 \ifx\#3\%
10556 \else
10557 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10558 \fi
10559 \Hy@href@nextactionraw
10560 >,%
10561 a=<%
10562 \ifHy@pdfa /F 4\fi
10563 \Hy@setpdfborder
10564 \ifx\@runbordercolor\relax
10565 \else
10566 /C[\@runbordercolor]%
10567 \fi
10568 >%
10569 }%
10570 \Hy@colorlink\@runcolor
10571   #2\Hy@xspace@end
10572 \Hy@endcolorlink
10573 \special{!endaref}%
10574 }
10575 \def\Acrobatmenu#1#2{%
10576 \EdefEscapeName\Hy@temp@menu{#1}%
10577 \Hy@Acrobatmenu{#1}{#2}{%
10578 \special{!%
10579 aref <u=/S /Named /N /\Hy@temp@menu>;%
10580 a=<%
10581 \ifHy@pdfa /F 4\fi
10582 \Hy@setpdfborder
10583 \ifx\@menubordercolor\relax
10584 \else
10585 /C[\@menubordercolor]%
10586 \fi
10587 >%
10588 }%

```



```

10589 \Hy@colorlink\@menucolor
10590 #2\Hy@xspace@end
10591 \Hy@endcolorlink
10592 \special{!endaref}%
10593 }%
10594 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for \TeX 7.02 or later.

Please never use $\text{\@ifundefined{VTeXversion}}{..}{..}$ *globally*.

```

10595 \ifnum\Hy@VTeXversion<702 %
10596 \else
10597 \def\hyper@pagetransition{%
10598 \ifx\@pdfpagetransition\relax
10599 \else
10600 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

10601 \else
10602 \hvtex@parse@trans\@pdfpagetransition
10603 \fi
10604 \fi
10605 }%

```

I have to write an “honest” parser to convert raw PDF code into \TeX \special .
(AVK)

Syntax of \TeX $\text{\special{!trans <transition_effect>}}$:

```

<transition\_effect> ::= <transition\_style>[,<transition\_duration>]
<transition\_style> ::= <Blinds\_effect> | <Box\_effect> |
                     <Dissolve\_effect> | <Glitter\_effect> |
                     <Split\_effect> | <Wipe\_effect>
<Blinds\_effect> ::= B[<effect\_dimension>]
<Box\_effect> ::= X[<effect\_motion>]
<Dissolve\_effect> ::= D
<Glitter\_effect> ::= G[<effect\_direction>]
<Split\_effect> ::= S[<effect\_motion>][<effect\_dimension>]
<Wipe\_effect> ::= W[<effect\_direction>]
<Replace\_effect> ::= R
<effect\_direction> ::= <number>
<effect\_dimension> ::= H | V
<effect\_motion> ::= I | O
<transition\_duration> ::= <number>

```

Transition codes:

```

10606 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
10607 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
10608 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
10609 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
10610 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
10611 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
10612 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

10613 \def\hvtex@par@dimension{/Dm}%

```

```

10614 \def\hvtex@par@direction{/Di}%
10615 \def\hvtex@par@duration{/D}%
10616 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

10617 \def\hvtex@gettoken{%
10618   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
10619 }%

```

Notice that tokens in the input buffer must be space delimited.

```

10620 \def\hvtex@gettoken@#1 #2\@nil{%
10621   \edef\hvtex@token{#1}%
10622   \edef\hvtex@buffer{#2}%
10623 }%
10624 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

10625 \let\hvtex@trans@code\@empty
10626 \let\hvtex@param@dimension\@empty
10627 \let\hvtex@param@direction\@empty
10628 \let\hvtex@param@duration\@empty
10629 \let\hvtex@param@motion\@empty
10630 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

10631 \hvtex@gettoken
10632 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

10633 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

10634 \else
10635   \hvtex@gettoken
10636 \fi
10637 \fi
10638 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

10639 \hvtex@trans@params
10640 }%

```

Reentrant macro to parse optional parameters.

```

10641 \def\hvtex@trans@params{%
10642   \ifx\hvtex@buffer\@empty
10643   \else
10644     \hvtex@gettoken
10645     \let\hvtex@trans@par\hvtex@token
10646     \ifx\hvtex@buffer\@empty
10647     \else
10648       \hvtex@gettoken
10649       \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```

10650       \let\hvtex@param@duration\hvtex@token
10651     \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```
10652      \expandafter\edef\expandafter\hvtex@param@motion
10653      \expandafter{\expandafter\@gobble\hvtex@token}%
10654      \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
10655      \expandafter\edef\expandafter\hvtex@param@dimension
10656      \expandafter{\expandafter\@gobble\hvtex@token}%
10657      \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).

```
10658      \let\hvtex@param@direction\hvtex@token
10659      \fi\fi\fi\fi
10660      \fi
10661      \fi
10662      \ifx\hvtex@buffer\@empty
10663      \let\next\hvtex@produce@trans
10664      \else
10665      \let\next\hvtex@trans@params
10666      \fi
10667      \next
10668 }%
```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```
10669  \def\hvtex@produce@trans{%
10670  \let\vtex@trans@special\@empty
10671  \if S\hvtex@trans@code
10672  \edef\vtex@trans@special{\hvtex@trans@code
10673  \hvtex@param@dimension\hvtex@param@motion}%
10674  \else\if B\hvtex@trans@code
10675  \edef\vtex@trans@special{%
10676  \hvtex@trans@code\hvtex@param@dimension
10677  }%
10678  \else\if X\hvtex@trans@code
10679  \edef\vtex@trans@special{%
10680  \hvtex@trans@code\hvtex@param@motion
10681  }%
10682  \else\if W\hvtex@trans@code
10683  \edef\vtex@trans@special{%
10684  \hvtex@trans@code\hvtex@param@direction
10685  }%
10686  \else\if D\hvtex@trans@code
10687  \let\vtex@trans@special\hvtex@trans@code
10688  \else\if R\hvtex@trans@code
10689  \let\vtex@trans@special\hvtex@trans@code
10690  \else\if G\hvtex@trans@code
10691  \edef\vtex@trans@special{%
10692  \hvtex@trans@code\hvtex@param@direction
10693  }%
10694  \fi\fi\fi\fi\fi\fi
10695  \ifx\vtex@trans@special\@empty
10696  \else
10697  \ifx\hvtex@param@duration\@empty
```

```

10698 \else
10699 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

10700 \multiply\dimen@\@m
10701 \edef\vtex@trans@special{%
10702 \vtex@trans@special,\strip@pt\dimen@
10703 }%
10704 \fi

```

And all the mess is just for this.

```

10705 \special{!trans \vtex@trans@special}%
10706 \fi
10707 }%

10708 \def\hyper@pageduration{%
10709 \ifx\@pdfpageduration\relax
10710 \else
10711 \ifx\@pdfpageduration\@empty
10712 \special{!duration-}%
10713 \else
10714 \special{!duration \@pdfpageduration}%
10715 \fi
10716 \fi
10717 }%
10718 \g@addto@macro\Hy@EveryPageBoxHook{%
10719 \hyper@pagetransition
10720 \hyper@pageduration
10721 }%
10722 \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

```

10723 \ifx\@pdfproducer\relax
10724 \def\@pdfproducer{VTeX}%
10725 \ifnum\Hy@VTeXversion>\z@
10726 \count@\VTeXversion
10727 \divide\count@ 100 %
10728 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
10729 \multiply\count@ -100 %
10730 \advance\count@\VTeXversion
10731 \edef\@pdfproducer{%
10732 \@pdfproducer
10733 .\ifnum\count@<10 0\fi\the\count@
10734 \ifx\VTeXOS\@undefined\else
10735 \ifnum\VTeXOS>0 %
10736 \ifnum\VTeXOS<6 %

```

```

10737     \space(
10738     \ifcase\VTexOS
10739     \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
10740     \fi
10741     )%
10742   \fi
10743 \fi
10744 \fi
10745 ,\space
10746 \ifnum\OpMode=\@ne PDF\else PS\fi
10747 \space backend%
10748 \ifx\gexmode\@undefined\else
10749 \ifnum\gexmode>\z@\space with GeX\fi
10750 \fi
10751 }%
10752 \fi
10753 \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).

```

10754 \def\PDF@SetupDoc{%
10755   \ifx\@pdfpagescrop\@empty
10756   \else
10757     \special{!pdfinfo b=<\@pdfpagescrop>}%
10758   \fi
10759   \ifx\@pdfstartpage\@empty
10760   \else
10761     \ifx\@pdfstartview\@empty
10762     \else
10763       \special{!onopen Page\@pdfstartpage}%
10764     \fi
10765   \fi
10766   \special{!pdfinfo p=</\@pdfpagemode>}%
10767   \ifx\@baseurl\@empty
10768   \else
10769     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
10770   \fi
10771   \special{!pdfinfo v=<<<%
10772     \ifHy@pdftoolbar\else /HideToolbar true\fi
10773     \ifHy@pdfmenubar\else /HideMenubar true\fi
10774     \ifHy@pdfwindowui\else /HideWindowUI true\fi

```

```

10775 \ifHy@pdffitwindow /FitWindow true\fi
10776 \ifHy@pdfcenterwindow /CenterWindow true\fi
10777 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10778 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10779 \Hy@UseNameKey{Direction}\@pdfdirection
10780 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10781 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10782 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10783 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10784 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10785 \Hy@UseNameKey{Duplex}\@pdfduplex
10786 \ifx\@pdfpicktraybypdfsize\@empty
10787 \else
10788 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10789 \fi
10790 \ifx\@pdfprintpagerange\@empty
10791 \else
10792 /PrintPageRange[\@pdfprintpagerange]%
10793 \fi
10794 \ifx\@pdfnumcopies\@empty
10795 \else
10796 /NumCopies \@pdfnumcopies
10797 \fi
10798 >>>}%
10799 \ifx\@pdfpagelayout\@empty
10800 \else
10801 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
10802 \fi
10803 }%
10804 \HyInfo@AddonUnsupportedtrue
10805 \define@key{Hyp}{pdfcreationdate}{%
10806 \Hy@Warning{%
10807 VTeX does not support pdfcreationdate.\MessageBreak
10808 Therefore its setting is ignored%
10809 }%
10810 }
10811 \define@key{Hyp}{pdfmoddate}{%
10812 \Hy@Warning{%
10813 VTeX does not support pdfmoddate.\MessageBreak
10814 Therefore its setting is ignored%
10815 }%
10816 }
10817 \def\PDF@FinishDoc{%
10818 \Hy@UseMaketitleInfos
10819 \HyInfo@TrappedUnsupported
10820 \special{!pdfinfo a=<\@pdfauthor>}%
10821 \special{!pdfinfo t=<\@pdftitle>}%
10822 \special{!pdfinfo s=<\@pdfsubject>}%
10823 \special{!pdfinfo c=<\@pdfcreator>}%
10824 \ifx\@pdfproducer\relax
10825 \else
10826 \special{!pdfinfo r=<\@pdfproducer>}%
10827 \fi
10828 \special{!pdfinfo k=<\@pdfkeywords>}%

```

```

10829 \Hy@DisableOption{pdfauthor}%
10830 \Hy@DisableOption{pdftitle}%
10831 \Hy@DisableOption{pdfsubject}%
10832 \Hy@DisableOption{pdfcreator}%
10833 \Hy@DisableOption{addtopdfcreator}%
10834 \Hy@DisableOption{pdfcreationdate}%
10835 \Hy@DisableOption{pdfcreationdate}%
10836 \Hy@DisableOption{pdfmoddate}%
10837 \Hy@DisableOption{pdfproducer}%
10838 \Hy@DisableOption{pdfkeywords}%
10839 \Hy@DisableOption{pdftrapped}%
10840 \Hy@DisableOption{pdfinfo}%
10841 }
10842 </vtx>

```

43.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

10843 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
10844 <packageEnd>\providecommand*{\Hy@DistillerDestFix}{-}
10845 <*pdfmark | dviwindo>
10846 \def\Hy@DistillerDestFix{%
10847   \begingroup
10848     \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

10849   \ifnum \@ifundefined{OpMode}{0}{%
10850     \@ifundefined{gexmode}{0}{%
10851       \ifnum\gexmode>0 \OpMode\else 0\fi
10852     }}>1 %
10853   \def\x##1{%
10854     \immediate\special{!##1}%
10855   }%
10856   \fi
10857   \x{%
10858     /product where{%
10859       pop %
10860       product(Distiller)search{%
10861         pop pop pop %
10862         version(.)search{%
10863           exch pop exch pop%
10864           (3011)eq{%
10865             gsave %
10866             newpath 0 0 moveto closepath clip%

```

```

10867         /Courier findfont 10 scalefont setfont %
10868         72 72 moveto(.)show %
10869         grestore%
10870     }if%
10871     }{pop}ifelse%
10872     }{pop}ifelse%
10873     }if%
10874     }%
10875 \endgroup
10876 }
10877 </pdfmark | dviwindo>

```

43.8 Direct pdfmark support

Drivers that load `pdfmark.def` have to provide the correct macro definitions of

```

\@pdfproducer    for document information
\literalps@out   PostScript output
\headerps@out    PostScript output that goes in the header area

```

and the correct definitions of the following PostScript procedures:

```

H.S      start of anchor, link or rect
#1 H.A   end of anchor, argument=baselineskip in pt
#1 H.L   end of link, argument=baselineskip in pt
H.R      end of rect
H.B      raw rect code

```

```

10878 <*pdfmark>
10879 \Hy@breaklinks@unsupported
10880 \def\HyPat@ObjRef{%
10881   \{[~{}]+\}%
10882 }
10883 \Hy@WrapperDef\hyper@anchor#1{%
10884   \Hy@SaveLastskip
10885   \Hy@VerboseAnchor{#1}%
10886   \begingroup
10887     \pdfmark[\anchor@spot]{%
10888       pdfmark=/DEST,%
10889       linktype=anchor,%
10890       View=/\@pdfview \@pdfviewparams,%
10891       DestAnchor={#1}%
10892     }%
10893   \endgroup
10894   \Hy@RestoreLastskip
10895 }
10896 \ltx@ifundefined{hyper@anchorstart}{\endinput}{}
10897 \Hy@WrapperDef\hyper@anchorstart#1{%
10898   \Hy@SaveLastskip
10899   \Hy@VerboseAnchor{#1}%
10900   \literalps@out{H.S}%
10901   \Hy@AllowHyphens
10902   \xdef\hyper@currentanchor{#1}%
10903   \Hy@activeanchortrue
10904 }

```



```

10905 \def\hyper@anchorend{%
10906 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10907 \pdfmark{%
10908   pdfmark=/DEST,%
10909   linktype=anchor,%
10910   View=/\@pdfview \@pdfviewparams,%
10911   DestAnchor=\hyper@currentanchor,%
10912 }%
10913 \Hy@activeanchorfalse
10914 \Hy@RestoreLastskip
10915 }
10916 \def\hyper@linkstart#1#2{%
10917 \Hy@VerboseLinkStart{#1}{#2}%
10918 \ifHy@breaklinks
10919 \else
10920 \leavevmode
10921 \ifmmode
10922 \def\Hy@LinkMath{$}%
10923 \else
10924 \let\Hy@LinkMath\ltx@empty
10925 \fi
10926 \Hy@SaveSpaceFactor
10927 \hbox\bgroup
10928 \Hy@RestoreSpaceFactor
10929 \Hy@LinkMath
10930 \fi
10931 \expandafter\Hy@colorlink\csname @#1color\endcsname
10932 \literalps@out{H.S}%
10933 \Hy@AllowHyphens
10934 \xdef\hyper@currentanchor{#2}%
10935 \gdef\hyper@currentlinktype{#1}%
10936 }
10937 \def\hyper@linkend{%
10938 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
10939 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
10940 \let\Hy@tempcolor\relax
10941 }{%
10942 \edef\Hy@tempcolor{%
10943 \csname @\hyper@currentlinktype bordercolor\endcsname
10944 }%
10945 }%
10946 \pdfmark{%
10947   pdfmark=/ANN,%
10948   linktype=link,%
10949   Subtype=/Link,%
10950   PDFAFlags=4,%
10951   Dest=\hyper@currentanchor,%
10952   AcroHighlight=\@pdfhighlight,%
10953   Border=\@pdfborder,%
10954   BorderStyle=\@pdfborderstyle,%
10955   Color=\Hy@tempcolor,%
10956   Raw=H.B%
10957 }%
10958 \Hy@endcolorlink

```

```

10959 \ifHy@breaklinks
10960 \else
10961   \Hy@LinkMath
10962   \Hy@SaveSpaceFactor
10963   \egroup
10964   \Hy@RestoreSpaceFactor
10965 \fi
10966 }

```

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.

```

10967 \begingroup
10968   \catcode`P=12 %
10969   \catcode`T=12 %
10970 \lowercase{\endgroup
10971   \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
10972 }
10973 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

10974 \def\hyper@pagetransition{%
10975   \ifx\@pdfpagetransition\relax
10976   \else
10977     \ifx\@pdfpagetransition\@empty
10978       % 1. Does an old entry have to be deleted?
10979       % 2. If 1=yes, how to delete?
10980     \else
10981       \pdfmark{%
10982         pdfmark=/PUT,%
10983         Raw={%
10984           \string{ThisPage\string}%
10985           <</Trans << /S /\@pdfpagetransition\space >> >>%
10986         }%
10987       }%
10988     \fi
10989   \fi
10990 }

```

`\hyper@pageduration`

```

10991 \def\hyper@pageduration{%
10992   \ifx\@pdfpageduration\relax
10993   \else
10994     \ifx\@pdfpageduration\@empty
10995       % 1. Does an old entry have to be deleted?
10996       % 2. If 1=yes, how to delete?
10997     \else
10998       \pdfmark{%
10999         pdfmark=/PUT,%
11000         Raw={%
11001           \string{ThisPage\string}%
11002           <</Dur \@pdfpageduration>>%
11003         }%
11004       }%

```

```

11005 \fi
11006 \fi
11007 }

11008 \g@addto@macro\Hy@EveryPageBoxHook{%
11009 \hyper@pagetransition
11010 \hyper@pageduration
11011 }

11012 \def\hyper@image#1#2{%
11013 \hyper@linkurl{#2}{#1}%
11014 }
11015 \def\Hy@undefinedname{UNDEFINED}
11016 \def\hyper@link#1#2#3{%
11017 \Hy@VerboseLinkStart{#1}{#2}%
11018 \ltx@ifundefined{#1bordercolor}{%
11019 \let\Hy@tempcolor\relax
11020 }{%
11021 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11022 }%
11023 \begingroup
11024 \protected@edef\Hy@testname{#2}%
11025 \ifx\Hy@testname\@empty
11026 \Hy@Warning{%
11027 Empty destination name,\MessageBreak
11028 using \Hy@undefinedname'%
11029 }%
11030 \let\Hy@testname\Hy@undefinedname
11031 \fi
11032 \pdfmark[{#3}]{%
11033 Color=\Hy@tempcolor,%
11034 linktype={#1},%
11035 AcroHighlight=\@pdfhighlight,%
11036 Border=\@pdfborder,%
11037 BorderStyle=\@pdfborderstyle,%
11038 pdfmark=/ANN,%
11039 Subtype=/Link,%
11040 PDFAFlags=4,%
11041 Dest=\Hy@testname
11042 }%
11043 \endgroup
11044 }
11045 \newtoks\pdf@docset
11046 \def\PDF@FinishDoc{%
11047 \Hy@UseMaketitleInfos
11048 \Hy@Info@GenerateAddons
11049 \let\Hy@temp\@empty
11050 \ifx\@pdfcreationdate\@empty
11051 \else
11052 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11053 \fi
11054 \ifx\@pdfmoddate\@empty
11055 \else
11056 \expandafter\def\expandafter\Hy@temp\expandafter{%
11057 \Hy@temp

```

```

11058     ModDate=\@pdfmoddate,%
11059 }%
11060 \fi
11061 \ifx\@pdfproducer\relax
11062 \else
11063   \expandafter\def\expandafter\Hy@temp\expandafter{%
11064     \Hy@temp
11065     Producer=\@pdfproducer,%
11066   }%
11067 \fi
11068 \expandafter
11069 \pdfmark\expandafter{%
11070   \Hy@temp
11071   pdfmark=/DOCINFO,%
11072   Title=\@pdftitle,%
11073   Subject=\@pdfsubject,%
11074   Creator=\@pdfcreator,%
11075   Author=\@pdfauthor,%
11076   Keywords=\@pdfkeywords,%
11077   Trapped=\@pdftrapped
11078 }%
11079 \ifx\HyInfo@Addons\@empty
11080 \else
11081   \pdfmark{%
11082     pdfmark=/DOCINFO,%
11083     Raw={\HyInfo@Addons}%
11084   }%
11085 \fi
11086 \Hy@DisableOption{pdfauthor}%
11087 \Hy@DisableOption{pdftitle}%
11088 \Hy@DisableOption{pdfsubject}%
11089 \Hy@DisableOption{pdfcreator}%
11090 \Hy@DisableOption{addtopdfcreator}%
11091 \Hy@DisableOption{pdfcreationdate}%
11092 \Hy@DisableOption{pdfcreationdate}%
11093 \Hy@DisableOption{pdfmoddate}%
11094 \Hy@DisableOption{pdfproducer}%
11095 \Hy@DisableOption{pdfkeywords}%
11096 \Hy@DisableOption{pdftrapped}%
11097 \Hy@DisableOption{pdfinfo}%
11098 }
11099 \def\PDF@SetupDoc{%
11100   \def\Hy@temp{}%
11101   \ifx\@pdfstartpage\@empty
11102   \else
11103     \ifx\@pdfstartview\@empty
11104     \else
11105       \edef\Hy@temp{%
11106         ,Page=\@pdfstartpage
11107         ,View=\@pdfstartview
11108       }%
11109     \fi
11110   \fi
11111   \edef\Hy@temp{%

```

```

11112 \noexpand\pdfmark{%
11113 pdfmark=/DOCVIEW,%
11114 PageMode=/\@pdfpagemode
11115 \Hy@temp
11116 }%
11117 }%
11118 \Hy@temp
11119 \ifx\@pdfpagescrop\@empty
11120 \else
11121 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11122 \fi
11123 \edef\Hy@temp{%
11124 \ifHy@pdftoolbar\else /HideToolbar true\fi
11125 \ifHy@pdfmenubar\else /HideMenubar true\fi
11126 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11127 \ifHy@pdfwindow /FitWindow true\fi
11128 \ifHy@pdfcenterwindow /CenterWindow true\fi
11129 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11130 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11131 \Hy@UseNameKey{Direction}\@pdfdirection
11132 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11133 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11134 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11135 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11136 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11137 \Hy@UseNameKey{Duplex}\@pdfduplex
11138 \ifx\@pdfpicktraybypdfsize\@empty
11139 \else
11140 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11141 \fi
11142 \ifx\@pdfprintpagerange\@empty
11143 \else
11144 /PrintPageRange[\@pdfprintpagerange]%
11145 \fi
11146 \ifx\@pdfnumcopies\@empty
11147 \else
11148 /NumCopies \@pdfnumcopies
11149 \fi
11150 }%
11151 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11152 \pdfmark{%
11153 pdfmark=/PUT,%
11154 Raw={%
11155 \string{Catalog\string}<<%
11156 \ifx\Hy@temp\@empty
11157 \else
11158 /ViewerPreferences<<\Hy@temp>>%
11159 \fi
11160 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11161 \ifx\@pdflang\relax
11162 \else
11163 /Lang(\@pdflang)%
11164 \fi
11165 \ifx\@baseurl\@empty

```

```

11166     \else
11167     /URI<</Base(\Hy@pstringB)>>%
11168     \fi
11169     >>%
11170   }%
11171 }%
11172 }
11173 </pdfmark>
11174 <*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.

```

11175 \newif\ifHy@pdfmarkerror
11176 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
11177 \def\pdfmark@[#1]#2{%
11178   \Hy@pdfmarkerrorfalse
11179   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11180   \@processme
11181   \let\pdf@type\relax
11182   \let\pdf@objdef\ltx@empty
11183   \kvsetkeys{PDF}{#2}%
11184   \ifHy@pdfmarkerror
11185   \else
11186     \ifx\pdf@type\relax
11187       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11188       \ifx\#1\%
11189         \else
11190           \pdf@rect{#1}%
11191         \fi
11192       \else
11193         \ifx\#1\%
11194           \literalps@out{%
11195             [%
11196             \ifx\pdf@objdef\ltx@empty
11197             \else
11198               /_objdef\string{\pdf@objdef\string}%
11199             \fi
11200             \the\pdf@toks\space\pdf@type\space pdfmark%
11201             ]%
11202           \else
11203             \ltx@ifundefined{@\pdf@linktype color}{%
11204               \Hy@colorlink\@linkcolor
11205             }{%
11206               \expandafter\Hy@colorlink
11207               \csname @\pdf@linktype color\endcsname
11208             }%
11209             \pdf@rect{#1}%
11210             \literalps@out{%
11211               [%
11212               \ifx\pdf@objdef\ltx@empty

```

```

11213      \else
11214      /_objdef\string{\pdf@objdef\string}%
11215      \fi
11216      \the\pdf@toks\space\pdf@type\space pdfmark%
11217      }%
11218      \Hy@endcolorlink
11219    \fi
11220  \fi
11221 \fi
11222 }

```

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}

```

```

11223 \newsavebox{\pdf@box}
11224 \providecommand*{\Hy@setouterhbox}{\sbox}
11225 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11226 \def\Hy@DEST{/DEST}
11227 \def\pdf@rect#1{%
11228   \begingroup
11229   \chardef\x=1 %
11230   \def\Hy@temp{#1}%
11231   \ifx\Hy@temp\ltx@empty
11232     \chardef\x=0 %
11233   \else
11234     \def\y{\anchor@spot}%
11235     \ifx\Hy@temp\y
11236       \def\y{\relax}%
11237     \ifx\anchor@spot\y
11238       \chardef\x=0 %
11239     \fi
11240   \fi
11241   \fi
11242   \expandafter\endgroup
11243   \ifcase\x
11244     \literalps@out{H.S}%
11245     \literalps@out{H.R}%
11246   \else
11247     \leavevmode
11248     \Hy@SaveSpaceFactor
11249     \ifmmode
11250       \def\Hy@LinkMath{$}%
11251     \else
11252       \let\Hy@LinkMath\ltx@empty

```

```

11253 \fi
11254 \ifHy@breaklinks
11255 \Hy@setouterhbox\pdf@box{%
11256 \Hy@RestoreSpaceFactor
11257 \Hy@LinkMath
11258 \Hy@AllowHyphens#1\Hy@xspace@end
11259 \Hy@LinkMath
11260 \Hy@SaveSpaceFactor
11261 }%
11262 \else
11263 \sbox\pdf@box{%
11264 \Hy@RestoreSpaceFactor
11265 \Hy@LinkMath
11266 #1\Hy@xspace@end
11267 \Hy@LinkMath
11268 \Hy@SaveSpaceFactor
11269 }%
11270 \fi
11271 \dimen@ht\pdf@box
11272 \ifdim\dp\pdf@box=\z@
11273 \literalps@out{H.S}%
11274 \else
11275 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11276 \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...).

```

11277 \ifHy@breaklinks
11278 \ifhmode
11279 \Hy@breaklinkssunhbox\pdf@box
11280 \else
11281 \box\pdf@box
11282 \fi
11283 \else
11284 \expandafter\box\pdf@box
11285 \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

11286 \ifdim\dimen@=\z@
11287 \literalps@out{H.R}%
11288 \else
11289 \raise\dimen@\hbox{\literalps@out{H.R}}%
11290 \fi
11291 \Hy@RestoreSpaceFactor
11292 \fi
11293 \ifx\pdf@type\Hy@DEST
11294 \else
11295 \pdf@addtoksx{H.B}%
11296 \fi
11297 }

```


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.

```

11298 \newtoks\pdf@toks
11299 \newtoks\pdf@defaulttoks
11300 \pdf@defaulttoks={}
11301 \def\pdf@addtoks#1#2{%
11302   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11303   \@processme
11304 }
11305 \def\pdf@addtoksx#1{%
11306   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11307   \@processme
11308 }
11309 \def\PDFdefaults#1{%
11310   \pdf@defaulttoks={#1}%
11311 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

11312 % what is the type of pdfmark?
11313 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11314 % what is the link type?
11315 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11316 \def\pdf@linktype{link}
11317 % named object?
11318 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11319 \let\pdf@objdef\ltx@empty
11320 % parameter is a stream of PDF
11321 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11322 % parameter is a name
11323 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11324 % parameter is a array
11325 \define@key{PDF}{Border}{%
11326   \edef\Hy@temp{#1}%
11327   \ifx\Hy@temp\@empty
11328   \else
11329     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11330   \fi
11331 }
11332 \let\Hy@BorderArrayPatch\@empty
11333 % parameter is a dictionary
11334 \define@key{PDF}{BorderStyle}{%
11335   \edef\Hy@temp{#1}%
11336   \ifx\Hy@temp\@empty
11337   \else
11338     \pdf@addtoks{<<#1>>}{BS}%
11339   \fi
11340 }
11341 % parameter is a array
11342 \define@key{PDF}{Color}{%
11343   \ifx\relax#1\relax
11344   \else
11345     \pdf@addtoks{[#1]}{Color}% hash-ok
11346   \fi

```

```

11347 }
11348 % parameter is a string
11349 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11350 % parameter is a integer
11351 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11352 % parameter is a array
11353 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11354 % parameter is a string
11355 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11356 % parameter is a string or file
11357 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11358 % parameter is a destination
11359 \define@key{PDF}{Dest}{%
11360   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11361   \ifx\Hy@pstringDest\@empty
11362     \Hy@pdfmarkerrortrue
11363     \Hy@Warning{Destination with empty name ignored}%
11364   \else
11365     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11366   \fi
11367 }
11368 \define@key{PDF}{DestAnchor}{%
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 % parameter is a string
11378 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11379 % parameter is a string
11380 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11381 % parameter is a int
11382 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11383 \define@key{PDF}{PDFAFlags}{%
11384   \ifHy@pdfa
11385     \pdf@addtoks{#1}{F}%
11386   \fi
11387 }
11388 % parameter is a name
11389 \define@key{PDF}{AcroHighlight}{%
11390   \begingroup
11391     \edef\x{#1}%
11392     \expandafter\endgroup\ifx\x\@empty
11393   \else
11394     \pdf@addtoks{#1}{H}%
11395   \fi
11396 }
11397 % parameter is a string
11398 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11399 % parameter is a string
11400 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}

```

```

11401 % parameter is a string
11402 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11403 % parameter is a string
11404 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11405 % parameter is a Boolean
11406 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11407 % parameter is a integer or name
11408 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11409 % parameter is a name
11410 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11411 % parameter is a string
11412 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11413 % parameter is a array
11414 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11415 % parameter is a integer
11416 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11417 % parameter is a name
11418 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11419 % parameter is a string
11420 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11421 % parameter is a string
11422 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11423 % parameter is a string
11424 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11425 % parameter is an array
11426 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11427 % parameter is a string
11428 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11429 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11430 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11431 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11432 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11433 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11434 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11435 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11436 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11437 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11438 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11439 \define@key{PDF}{Trapped}{%
11440   \edef\Hy@temp{#1}%
11441   \ifx\Hy@temp\@empty
11442     \else
11443       \pdf@addtoks{/#1}{Trapped}%
11444     \fi
11445 }
11446
11447 </pdfmarkbase>
11448 <*pdfmark>
11449 \def\Acrobatmenu#1#2{%
11450   \EdefEscapeName\Hy@temp@menu{#1}%
11451   \Hy@Acrobatmenu{#1}{#2}{%
11452     \pdfmark[#{#2}]{%
11453       linktype=menu,%

```

```

11454 pdfmark=/ANN,%
11455 AcroHighlight=\@pdfhighlight,%
11456 Border=\@pdfborder,%
11457 BorderStyle=\@pdfborderstyle,%
11458 Color=\@menubordercolor,%
11459 Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
11460 Subtype=/Link,%
11461 PDFAFlags=4%
11462 }%
11463 }%
11464 }

```

And now for some useful examples:

```

11465 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
11466 \def\PDFNextPage@[#1]#2{%
11467   \pdfmark[{#2}]{%
11468     #1,%
11469     Border=\@pdfborder,%
11470     BorderStyle=\@pdfborderstyle,%
11471     Color=.2 .1 .5,%
11472     pdfmark=/ANN,%
11473     Subtype=/Link,%
11474     PDFAFlags=4,%
11475     Page=/Next%
11476   }%
11477 }
11478 \def\PDFPreviousPage{%
11479   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11480 }
11481 \def\PDFPreviousPage@[#1]#2{%
11482   \pdfmark[{#2}]{%
11483     #1,%
11484     Border=\@pdfborder,%
11485     BorderStyle=\@pdfborderstyle,%
11486     Color=.4 .4 .1,%
11487     pdfmark=/ANN,%
11488     Subtype=/Link,%
11489     PDFAFlags=4,%
11490     Page=/Prev%
11491   }%
11492 }
11493 \def\PDFOpen#1{%
11494   \pdfmark{#1,pdfmark=/DOCVIEW}%
11495 }

```

This will only work if you use Distiller 2.1 or higher.

```

11496 \def\hyper@linkurl#1#2{%
11497   \begingroup
11498   \Hy@pstringdef\Hy@pstringURI{#2}%
11499   \hyper@chars
11500   \leavevmode
11501   \pdfmark[{#1}]{%
11502     pdfmark=/ANN,%
11503     linktype=url,%
11504     AcroHighlight=\@pdfhighlight,%

```

```

11505     Border=\@pdfborder,%
11506     BorderStyle=\@pdfborderstyle,%
11507     Color=\@urlbordercolor,%
11508     Action={<<%
11509         /Subtype/URI%
11510         /URI(\Hy@pstringURI)%
11511         \ifHy@href@ismap
11512         /IsMap true%
11513         \fi
11514     >>},%
11515     Subtype=/Link,%
11516     PDFAFlags=4%
11517 }%
11518 \endgroup
11519 }
11520 \def\hyper@linkfile#1#2#3{%
11521 \begingroup
11522 \def\Hy@pstringF{#2}%
11523 \Hy@CleanupFile\Hy@pstringF
11524 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11525 \Hy@pstringdef\Hy@pstringD{#3}%
11526 \Hy@MakeRemoteAction
11527 \leavevmode
11528 \pdfmark[{#1}]{%
11529     pdfmark=/ANN,%
11530     Subtype=/Link,%
11531     PDFAFlags=4,%
11532     AcroHighlight=\@pdfhighlight,%
11533     Border=\@pdfborder,%
11534     BorderStyle=\@pdfborderstyle,%
11535     linktype=file,%
11536     Color=\@filebordercolor,%
11537     Action={%
11538         <<%
11539         /S/GoToR%
11540         \Hy@SetNewWindow
11541         /F(\Hy@pstringF)%
11542         /D%
11543         \ifx\#3\%
11544             [\Hy@href@page\@pdfremotestartview]%
11545         \else
11546             (\Hy@pstringD)cvn%
11547         \fi
11548         \Hy@href@nextactionraw
11549         >>%
11550     }%
11551 }%
11552 \endgroup
11553 }
11554 \def\@hyper@launch run:#1\#2#3{%
11555 \begingroup
11556 \Hy@pstringdef\Hy@pstringF{#1}%
11557 \Hy@pstringdef\Hy@pstringP{#3}%
11558 \leavevmode

```

```

11559 \pdfmark[{#2}]{%
11560 pdfmark=/ANN,%
11561 Subtype=/Link,%
11562 PDFAFlags=4,%
11563 AcroHighlight=\@pdfhighlight,%
11564 Border=\@pdfborder,%
11565 BorderStyle=\@pdfborderstyle,%
11566 linktype=run,%
11567 Color=\@runbordercolor,%
11568 Action={%
11569 <<%
11570 /S/Launch%
11571 \Hy@SetNewWindow
11572 /F(\Hy@pstringF)%
11573 \ifx\#3\%
11574 \else
11575 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11576 \fi
11577 \Hy@href@nextactionraw
11578 >>%
11579 }%
11580 }%
11581 \endgroup
11582 }
11583 \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.

```

11584 <dvips>
11585 \providecommand*\XR@ext>{pdf}
11586 \let\Hy@raisedlink\ltx@empty
11587 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
11588 \def\headerps@out#1{\special{! #1}}%
11589 \input{pdfmark.def}%
11590 \ifx\@pdfproducer\relax
11591 \def\@pdfproducer{dvips + Distiller}%
11592 \fi
11593 \providecommand*\@pdfborder{0 0 1}
11594 \providecommand*\@pdfborderstyle{}
11595 \providecommand*\@pdfview{XYZ}
11596 \providecommand*\@pdfviewparams{ H.V}
11597 \def\Hy@BorderArrayPatch{BorderArrayPatch}
11598 \g@addto@macro\Hy@FirstPageHook{%
11599 \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.

```
11600 /DvipsToPDF{72.27 mul Resolution div} def%
11601 /PDFToDvips{72.27 div Resolution mul} def%
11602 /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.

```
11603 product (Ghostscript) search {pop pop pop revision 927 gt}%
11604 {pop false} ifelse%
11605 {%
11606 /BorderArrayPatch{} def%
11607 }%
11608 {%
11609 /BorderArrayPatch{%
11610 [exch{%
11611 dup dup type/integertype eq exch type/realtype eq or%
11612 {BPToDvips}if%
11613 }forall]%
11614 }def%
11615 } 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.

```
11616 /HyperBorder {1 PDFToDvips} def%
11617 /H.V {pdf@hoff pdf@voff null} def%
11618 /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

```
11619 /H.S {%
11620 currentpoint %
11621 HyperBorder add /pdf@lly exch def %
11622 dup DvipsToPDF 72 add /pdf@hoff exch def %
11623 HyperBorder sub /pdf@llx exch def%
11624 } def%
```

The calculation of upper left *y* is done without raising the point in \TeX , by simply adding on the current $\backslash\text{baselineskip}$ to the current *y*. This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```

11625 /H.L {%
11626 2 sub dup%
11627 /HyperBasePt exch def %
11628 PDFToDvips /HyperBaseDvips exch def %
11629 currentpoint %
11630 HyperBaseDvips sub /pdf@ury exch def%
11631 /pdf@urx exch def%
11632 } def%
11633 /H.A {%
11634 H.L %
11635 % |pdf@voff| = the distance from the top of the page to a point
11636 % |baselineskip| above the current point in PDF coordinates
11637 currentpoint exch pop %
11638 vsize 72 sub exch DvipsToPDF %
11639 HyperBasePt sub % baseline skip
11640 sub /pdf@voff exch def%
11641 } def%
11642 /H.R {%
11643 currentpoint %
11644 HyperBorder sub /pdf@ury exch def %
11645 HyperBorder add /pdf@urx exch def %
11646 % |pdf@voff| = the distance from the top of the page to the current point, in
11647 % PDF coordinates
11648 currentpoint exch pop vsize 72 sub %
11649 exch DvipsToPDF sub /pdf@voff exch def%
11650 } def%
11651 }%
11652 }
11653 \AtBeginShipoutFirst{%
11654 \ifHy@setpagesize
11655 \begingroup
11656 \ifnum\mag=\@m
11657 \ifdim\stockwidth>\z@
11658 \ifdim\stockheight>\z@
11659 \special{papersize=\the\stockwidth,\the\stockheight}%
11660 \else
11661 \ifdim\paperwidth>\z@
11662 \ifdim\paperheight>\z@
11663 \special{papersize=\the\paperwidth,\the\paperheight}%
11664 \fi
11665 \fi
11666 \fi
11667 \else
11668 \ifdim\stockwidth=\z@
11669 \ifdim\paperwidth>\z@
11670 \ifdim\paperheight>\z@
11671 \special{papersize=\the\paperwidth,\the\paperheight}%
11672 \fi
11673 \fi
11674 \fi

```



```

11675 \fi
11676 \fi
11677 \endgroup
11678 \fi
11679 \Hy@DisableOption{setpagesize}%
11680 }

11681 \def\setpdfinkmargin#1{%
11682 \begingroup
11683 \setlength{\dimen@}{#1}%
11684 \literalps@out{%
11685 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11686 }%
11687 \endgroup
11688 }

11689 </dvips>

```

43.10 VTeX's vtexpdfmark driver

This part is derived from the dvips (many names reflect this).

The origin seems to be the same as TeX's origin, 1 in from the left and 1 in downwards from the top. The direction of the y axis is downwards, the opposite of the dvips case. Units seems to be pt or bp.

```

11690 (*vtexpdfmark)
11691 \providecommand*\XR@ext}{pdf}
11692 \let\Hy@raisedlink\ltx@empty
11693 \def\literalps@out#1{\special{pS:#1}}%
11694 \def\headerps@out#1{\immediate\special{pS:#1}}%
11695 \input{pdfmark.def}%
11696 \ifx\@pdfproducer\relax
11697 \ifnum\OpMode=\@ne
11698 \def\@pdfproducer{VTeX}%
11699 \else
11700 \def\@pdfproducer{VTeX + Distiller}%
11701 \fi
11702 \fi
11703 \providecommand*\@pdfborder{0 0 1}
11704 \providecommand*\@pdfborderstyle{}
11705 \providecommand*\@pdfview{XYZ}
11706 \providecommand*\@pdfviewparams{ H.V}

11707 \g@addto@macro\Hy@FirstPageHook{%
11708 \headerps@out{%
11709 /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.

```

11710 /HyperBorder {1} def%
11711 /H.V {pdf@hoff pdf@voff null} def%
11712 /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 = $X_c - \text{HyperBorder}$

```

11713 /H.S {%
11714   currentpoint %
11715   HyperBorder sub%
11716   /pdf@lly exch def %
11717   dup 72 add /pdf@hoff exch def %
11718   HyperBorder sub%
11719   /pdf@llx exch def%
11720 } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

11721 /H.L {%
11722   2 sub%
11723   /HyperBasePt exch def %
11724   currentpoint %
11725   HyperBasePt add HyperBorder add%
11726   /pdf@ury exch def %
11727   HyperBorder add%
11728   /pdf@urx exch def%
11729 } def%
11730 /H.A {%
11731   H.L %
11732   currentpoint exch pop %
11733   vsize 72 sub exch %
11734   HyperBasePt add add%
11735   /pdf@voff exch def%
11736 } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

11737 /H.R {%
11738   currentpoint %
11739   HyperBorder add%
11740   /pdf@ury exch def %
11741   HyperBorder add%
11742   /pdf@urx exch def %
11743   currentpoint exch pop vsize 72 sub add%
11744   /pdf@voff exch def%
11745 } def%
11746 }%
11747 }

```

```

11748 \def\setpdfinkmargin#1{%
11749   \begingroup
11750   \setlength{\dimen@}{#1}%
11751   \literalps@out{%
11752     /HyperBorder{\strip@pt\dimen@}def%
11753   }%
11754   \endgroup
11755 }
11756 \</vtxpdfmark>

```

43.11 Textures

```

11757 \<*textures>
11758 \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.

```
11759 \begingroup
11760 \obeylines %
11761 \gdef\Hy@ps@CR{\noexpand
11762 }%
11763 \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`.

```
11764 \def\literalps@out#1{%
11765 \special{postscript 0 0 transform}%
11766 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11767 }%
11768 %
```

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.

```
11769 \def\headerps@out#1{%
11770 \special{%
11771 prepostscript TeXdict begin\Hy@ps@CR
11772 #1\Hy@ps@CR
11773 end%
11774 }%
11775 }%
11776 %
```

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.

```
11777 \g@addto@macro\Hy@FirstPageHook{%
11778 \headerps@out{%
11779 /betterpdfmark {%
11780 systemdict begin %
11781 dup /BP eq%
11782 {cleartomark gsave nulldevice []%
11783 {dup /EP eq%
```

```

11784      {cleartomark cleartomark grestore}%
11785      {cleartomark}%
11786      ifelse%
11787      }ifelse %
11788      end%
11789      }def\Hy@ps@CR
11790      ____pdfmark__ not{/pdfmark /betterpdfmark load def}if%
11791      }% end of \headerps@out
11792 }% end of \AtBeginShipoutFirst
11793 %
11794 \input{pdfmark.def}%
11795 %
11796 \ifx\@pdfproducer\relax
11797   \def\@pdfproducer{Textures + Distiller}%
11798 \fi
11799 \providecommand*\@pdfborder{0 0 1}
11800 \providecommand*\@pdfborderstyle{}
11801 \providecommand*\@pdfview{XYZ}
11802 \providecommand*\@pdfviewparams{ H.V}
11803 %

```

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 .

```

11804 \Hy@AtBeginDocument{%
11805   \headerps@out{%

```

`Textures` lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

11806   /vsize {\Hy@pageheight} def%
11807   /DvipsToPDF {} def%
11808   /PDFToDvips {} def%
11809   /BPTToDvips {} def%
11810   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11811   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
11812   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11813   /H.S {%
11814     currentpoint %
11815     HyperBorder add /pdf@lly exch def %
11816     dup DvipsToPDF 72 add /pdf@hoff exch def %
11817     HyperBorder sub /pdf@llx exch def%
11818   } def\Hy@ps@CR
11819   /H.L {%
11820     2 sub %
11821     PDFToDvips /HyperBase exch def %
11822     currentpoint %
11823     HyperBase sub /pdf@ury exch def%
11824     /pdf@urx exch def%
11825   } def\Hy@ps@CR
11826   /H.A {%
11827     H.L %
11828     currentpoint exch pop %

```

```

11829     vsize 72 sub exch DvipsToPDF %
11830     HyperBase sub % baseline skip
11831     sub /pdf@voff exch def%
11832   } def\Hy@ps@CR
11833   /H.R {%
11834     currentpoint %
11835     HyperBorder sub /pdf@ury exch def %
11836     HyperBorder add /pdf@urx exch def %
11837     currentpoint exch pop vsize 72 sub %
11838     exch DvipsToPDF sub /pdf@voff exch def%
11839   } def\Hy@ps@CR
11840 }%
11841 }

11842 \def\setpdfinkmargin#1{%
11843   \begingroup
11844     \setlength{\dimen@}{#1}%
11845     \literalps@out{%
11846       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11847     }%
11848   \endgroup
11849 }

11850 \Hy@AtBeginDocument{%
11851   \ifHy@colorlinks
11852     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11853   \fi
11854 }

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.

11855 \expandafter\let\expandafter\keepPDF@SetupDoc
11856   \csname PDF@SetupDoc\endcsname
11857 \def\PDF@SetupDoc{%
11858   \ifx\@baseurl\@empty
11859     \else
11860       \special{html:<base href="\@baseurl">}%
11861     \fi
11862   \keepPDF@SetupDoc
11863 }

11864 \Hy@WrapperDef\hyper@anchor#1{%
11865   \Hy@SaveLastskip
11866   \Hy@VerboseAnchor{#1}%
11867   \begingroup
11868     \let\protect=\string
11869     \special{html:<a name=%
11870       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11871   \endgroup
11872   \Hy@activeanchortrue
11873   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11874   \special{html:</a>}%
11875   \Hy@activeanchorfalse
11876   \Hy@RestoreLastskip
11877 }

```

```

11878 \Hy@WrapperDef\hyper@anchorstart#1{%
11879 \Hy@SaveLastskip
11880 \Hy@VerboseAnchor{#1}%
11881 \begingroup
11882 \hyper@chars
11883 \special{html:<a name=%
11884 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
11885 \endgroup
11886 \Hy@activeanchortrue
11887 }
11888 \def\hyper@anchorend{%
11889 \special{html:</a>}}%
11890 \Hy@activeanchorfalse
11891 \Hy@RestoreLastskip
11892 }
11893 \def\@urltype{url}
11894 \def\hyper@linkstart#1#2{%
11895 \Hy@VerboseLinkStart{#1}{#2}%
11896 \expandafter\Hy@colorlink\csname @#1color\endcsname
11897 \def\Hy@tempa{#1}%
11898 \ifx\Hy@tempa\@urltype
11899 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
11900 \else
11901 \begingroup
11902 \hyper@chars
11903 \special{%
11904 html:<a href=%
11905 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>%
11906 }%
11907 \endgroup
11908 \fi
11909 }
11910 \def\hyper@linkend{%
11911 \special{html:</a>}}%
11912 \Hy@endcolorlink
11913 }
11914 \def\hyper@linkfile#1#2#3{%
11915 \hyper@linkurl{#1}{%
11916 \Hy@linkfileprefix#2\ifx\#3\else\##3\fi
11917 }%
11918 }
11919 \def\hyper@linkurl#1#2{%
11920 \leavevmode
11921 \ifHy@raiselinks
11922 \Hy@SaveSpaceFactor
11923 \Hy@SaveSavedSpaceFactor
11924 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11925 \Hy@RestoreSavedSpaceFactor
11926 \@linkdim\dp\@tempboxa
11927 \lower\@linkdim\hbox{%
11928 \hyper@chars
11929 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
11930 }%
11931 \Hy@colorlink\@urlcolor

```

```

11932 \Hy@RestoreSpaceFactor
11933 #1\Hy@xspace@end
11934 \Hy@SaveSpaceFactor
11935 \@linkdim\ht\@tempboxa
11936 \advance\@linkdim by -6.5\p@
11937 \raise\@linkdim\hbox{\special{html:</a>}}%
11938 \Hy@endcolorlink
11939 \Hy@RestoreSpaceFactor
11940 \else
11941 \begingroup
11942 \hyper@chars
11943 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11944 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
11945 \special{html:</a>}%
11946 \Hy@endcolorlink
11947 \endgroup
11948 \fi
11949 }

```

Very poor implementation of \hyper@link without considering #1.

```

11950 \def\hyper@link#1#2#3{%
11951 \Hy@VerboseLinkStart{#1}{#2}%
11952 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
11953 }
11954 \def\hyper@image#1#2{%
11955 \begingroup
11956 \hyper@chars
11957 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
11958 \endgroup
11959 }
11960 </textures>

```

43.12 dvipsone

```

11961 % \subsection{dvipsone driver}
11962 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
11963 % |\special| commands.
11964 (*dvipsone)
11965 \providecommand*\XR@ext}{pdf}
11966 \let\Hy@raisedlink\ltx@empty
11967 \providecommand*\@pdfborder{0 0 1}
11968 \providecommand*\@pdfborderstyle{}
11969 \def\literalps@out#1{\special{ps:#1}}%
11970 \def\headerps@out#1{\special{headertext=#1}}%
11971 \input{pdfmark.def}%
11972 \HyInfo@AddonUnsupportedtrue
11973 \def\PDF@FinishDoc{%
11974 \Hy@UseMaketitleInfos
11975 \HyInfo@TrappedUnsupported
11976 \special{PDF: Keywords \@pdfkeywords}%
11977 \special{PDF: Title \@pdftitle}%
11978 \special{PDF: Creator \@pdfcreator}%
11979 \ifx\@pdfcreationdate\@empty
11980 \else

```

```

11981 \special{PDF: CreationDate \@pdfcreationdate}%
11982 \fi
11983 \ifx\@pdfmoddate\@empty
11984 \else
11985 \special{PDF: ModDate \@pdfmoddate}%
11986 \fi
11987 \special{PDF: Author \@pdfauthor}%
11988 \ifx\@pdfproducer\relax
11989 \else
11990 \special{PDF: Producer \@pdfproducer}%
11991 \fi
11992 \special{PDF: Subject \@pdfsubject}%
11993 \Hy@DisableOption{pdfauthor}%
11994 \Hy@DisableOption{pdftitle}%
11995 \Hy@DisableOption{pdfsubject}%
11996 \Hy@DisableOption{pdfcreator}%
11997 \Hy@DisableOption{addtopdfcreator}%
11998 \Hy@DisableOption{pdfcreationdate}%
11999 \Hy@DisableOption{pdfcreationdate}%
12000 \Hy@DisableOption{pdfmoddate}%
12001 \Hy@DisableOption{pdfproducer}%
12002 \Hy@DisableOption{pdfkeywords}%
12003 \Hy@DisableOption{pdftrapped}%
12004 \Hy@DisableOption{pdfinfo}%
12005 }
12006 \def\PDF@SetupDoc{%
12007 \def\Hy@temp{}%
12008 \ifx\@pdfstartpage\@empty
12009 \else
12010 \ifx\@pdfstartview\@empty
12011 \else
12012 \edef\Hy@temp{%
12013 ,Page=\@pdfstartpage
12014 ,View=\@pdfstartview
12015 }%
12016 \fi
12017 \fi
12018 \edef\Hy@temp{%
12019 \noexpand\pdfmark{%
12020 pdfmark=/DOCVIEW,%
12021 PageMode=/\@pdfpagemode
12022 \Hy@temp
12023 }%
12024 }%
12025 \Hy@temp
12026 \ifx\@pdfpagescrop\@empty
12027 \else
12028 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12029 \fi
12030 \edef\Hy@temp{%
12031 \ifHy@pdftoolbar\else /HideToolbar true\fi
12032 \ifHy@pdfmenubar\else /HideMenubar true\fi
12033 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12034 \ifHy@pdfwindow /FitWindow true\fi

```



```

12035 \ifHy@pdfcenterwindow /CenterWindow true\fi
12036 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12037 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12038 \Hy@UseNameKey{Direction}\@pdfdirection
12039 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12040 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12041 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12042 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12043 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12044 \Hy@UseNameKey{Duplex}\@pdfduplex
12045 \ifx\@pdfpicktraybypdfsize\@empty
12046 \else
12047 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12048 \fi
12049 \ifx\@pdfprintpagerange\@empty
12050 \else
12051 /PrintPageRange[\@pdfprintpagerange]%
12052 \fi
12053 \ifx\@pdfnumcopies\@empty
12054 \else
12055 /NumCopies \@pdfnumcopies
12056 \fi
12057 }%
12058 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12059 \pdfmark{%
12060 pdfmark=/PUT,%
12061 Raw={%
12062 \string{Catalog\string}<<%
12063 \ifx\Hy@temp\@empty
12064 \else
12065 /ViewerPreferences<<\Hy@temp>>%
12066 \fi
12067 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12068 \ifx\@pdflang\relax
12069 \else
12070 /Lang(\@pdflang)%
12071 \fi
12072 \ifx\@baseurl\@empty
12073 \else
12074 /URI<</Base(\Hy@pstringB)>>%
12075 \fi
12076 >>%
12077 }%
12078 }%
12079 }
12080 \providecommand*\@pdfview{XYZ}
12081 \providecommand*\@pdfviewparams{ %
12082 gsave revscl currentpoint grestore %
12083 72 add exch pop null exch null%
12084 }
12085 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates

of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to T_EX.

```
12086 \g@addto@macro\Hy@FirstPageHook{%
12087   \headerps@out{%
```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```
12088   /DvipsToPDF { 65781 div } def%
12089   /PDFToDvips { 65781 mul } def%
12090   /BPToDvips{65781 mul}def%
12091   /HyperBorder { 1 PDFToDvips } def%
12092   /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.

```
12093   /BorderArrayPatch{%
12094     [exch{%
12095       dup dup type/integertype eq exch type/realtype eq or%
12096       {BPToDvips}if%
12097     }forall]%
12098   }def%
12099   /H.S {%
12100     currentpoint %
12101     HyperBorder add /pdf@lly exch def %
12102     dup DvipsToPDF 72 add /pdf@hoff exch def %
12103     HyperBorder sub /pdf@llx exch def%
12104   } def%
12105   /H.L {%
12106     2 sub %
12107     PDFToDvips /HyperBase exch def %
12108     currentpoint %
12109     HyperBase sub /pdf@ury exch def%
12110     /pdf@urx exch def%
12111   } def%
12112   /H.A {%
12113     H.L %
12114     currentpoint exch pop %
12115     HyperBase sub % baseline skip
12116     DvipsToPDF /pdf@voff exch def%
12117   } def%
12118   /H.R {%
12119     currentpoint %
12120     HyperBorder sub /pdf@ury exch def %
12121     HyperBorder add /pdf@urx exch def %
12122     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12123   } def%
12124 }%
12125 }

12126 \def\setpdfinkmargin#1{%
12127   \begingroup
12128     \setlength{\dimen@}{#1}%
12129     \literalps@out{%
12130       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
```

```

12131 }%
12132 \endgroup
12133 }
12134 </dvipsone>

```

43.13 TeX4ht

```

12135 (*tex4ht)
12136 \providecommand*{\XR@ext}{html}
12137 \let\Hy@raisedlink\ltx@empty
12138 \@ifpackageloaded{tex4ht}{%
12139   \Hy@InfoNoLine{tex4ht is already loaded}%
12140 }{%
12141   \RequirePackage[hTeX4ht]{tex4ht}%
12142 }
12143 \hyperlinkfileprefix{}
12144 \let\PDF@FinishDoc\ltx@empty
12145 \def\PDF@SetupDoc{%
12146   \ifx\@baseurl\@empty
12147     \else
12148       \special{t4ht=<base href="\@baseurl">}%
12149     \fi
12150 }
12151 \Hy@WrapperDef\hyper@anchor#1{%
12152   \Hy@SaveLastskip
12153   \Hy@VerboseAnchor{#1}%
12154   \begingroup
12155     \let\protect=\string
12156     \special{t4ht=<a name=%
12157       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12158   \endgroup
12159   \Hy@activeanchortrue
12160   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12161   \special{t4ht=</a>}%
12162   \Hy@activeanchorfalse
12163   \Hy@RestoreLastskip
12164 }
12165 \Hy@WrapperDef\hyper@anchorstart#1{%
12166   \Hy@SaveLastskip
12167   \Hy@VerboseAnchor{#1}%
12168   \begingroup
12169     \hyper@chars\special{t4ht=<a name=%
12170       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12171   \endgroup
12172   \Hy@activeanchortrue
12173 }
12174 \def\hyper@anchorend{%
12175   \special{t4ht=</a>}%
12176   \Hy@activeanchorfalse
12177   \Hy@RestoreLastskip
12178 }
12179 \def\@urltype{url}
12180 \def\hyper@linkstart#1#2{%
12181   \Hy@VerboseLinkStart{#1}{#2}%
12182   \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

12183 \def\Hy@tempa{#1}%
12184 \ifx\Hy@tempa\@urltype
12185   \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12186 \else
12187   \begingroup
12188     \hyper@chars
12189     \special{t4ht=<a href=%
12190       \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12191   \endgroup
12192 \fi
12193 }
12194 \def\hyper@linkend{%
12195   \special{t4ht=</a>}%
12196   \Hy@endcolorlink
12197 }
12198 \def\hyper@linkfile#1#2#3{%
12199   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
12200 }
12201 \def\hyper@linkurl#1#2{%
12202   \leavevmode
12203   \ifHy@raiselinks
12204     \Hy@SaveSpaceFactor
12205     \Hy@SaveSavedSpaceFactor
12206     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12207     \Hy@RestoreSavedSpaceFactor
12208     \@linkdim\dp\@tempboxa
12209     \lower\@linkdim\hbox{%
12210       \begingroup
12211         \hyper@chars
12212         \special{%
12213           t4ht=<a href=\hyper@quote#2\hyper@quote>%
12214         }%
12215       \endgroup
12216     }%
12217     \Hy@colorlink\@urlcolor
12218     \Hy@RestoreSpaceFactor
12219     #1\Hy@xspace@end
12220     \Hy@SaveSpaceFactor
12221     \Hy@endcolorlink
12222     \@linkdim\ht\@tempboxa
12223     \advance\@linkdim by -6.5\p@
12224     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12225     \Hy@RestoreSpaceFactor
12226   \else
12227     \begingroup
12228     \hyper@chars
12229     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12230     \Hy@colorlink\@urlcolor
12231     #1\Hy@xspace@end
12232     \Hy@endcolorlink
12233     \special{t4ht=</a>}%
12234   \endgroup
12235 \fi
12236 }

```

Poor implementation of \hyper@link without considering #1.

```
12237 \def\hyper@link#1#2#3{%
12238   \Hy@VerboseLinkStart{#1}{#2}%
12239   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
12240 }
12241 \def\hyper@image#1#2{%
12242   \begingroup
12243     \hyper@chars
12244     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12245   \endgroup
12246 }
12247 \let\autoref\ref
12248 \ifx \rEFLiNK \UnDef
12249   \def\rEFLiNK #1#2{#2}%
12250 \fi
12251 \let\backref\ltx@gobble
```

Fix for tex4ht.

```
12252 \AtBeginDocument{%
12253   \expandafter
12254   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12255   \expandafter\def\csname Make:Label\endcsname#1#2{%
12256     \ifhmode
12257       \Hy@SaveSpaceFactor
12258     \else
12259       \global\Hy@SavedSpaceFactor=1000 %
12260     \fi
12261     \Hy@OrgMakeLabel{#1}{%
12262       \Hy@RestoreSpaceFactor
12263       #2\Hy@xspace@end%
12264       \Hy@SaveSpaceFactor
12265     }%
12266     \Hy@RestoreSpaceFactor
12267   }%
12268 }
12269 </tex4ht>
12270 <*tex4htcfg>
12271 \IfFileExists{\jobname.cfg}{\endinput}{}
12272 \Preamble{html}
12273   \begin{document}%
12274 \EndPreamble
12275 \def\TeX{TeX}
12276 \def\OMEGA{\Omega}
12277 \def\LaTeX{\LaTeX}
12278 \def\LaTeXe{\LaTeXe}
12279 \def\TeXe{e-TeX}
12280 \def\MF{Metafont}
12281 \def\MP{MetaPost}
12282 </tex4htcfg>
```

44 Driver-specific form support

44.1 pdfmarks

change 2020-06-20: added /Euro to encoding

12283 (*pdfmark)
12284 \long\def\@Form[#1]{%
12285 \g@addto@macro\Hy@FirstPageHook{%
12286 \headerps@out{%
12287 [%
12288 /_objdef{pdfDocEncoding}%
12289 /type/dict%
12290 /OBJ pdfmark%
12291 [%
12292 {pdfDocEncoding}%
12293 <<%
12294 /Type/Encoding%
12295 /Differences[%
12296 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12297 /tilde %
12298 39/quotesingle %
12299 96/grave %
12300 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12301 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12302 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12303 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12304 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12305 160/Euro %
12306 164/currency %
12307 166/brokenbar %
12308 168/dieresis/copyright/ordfeminine %
12309 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12310 /twosuperior/threesuperior/acute/mu %
12311 183/periodcentered/cedilla/onesuperior/ordmasculine %
12312 188/onequarter/onehalf/threequarters %
12313 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12314 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12315 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12316 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12317 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12318 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12319 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12320 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12321 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12322 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12323]%
12324 >>%
12325 /PUT pdfmark%
12326 [%
12327 /_objdef{ZaDb}%
12328 /type/dict%
12329 /OBJ pdfmark%
12330 [%
12331 {ZaDb}%
12332 <<%
12333 /Type/Font%
12334 /Subtype/Type1%
12335 /Name/ZaDb%
12336 /BaseFont/ZapfDingbats%

```

12337 >>%
12338 /PUT pdfmark%
12339 [%
12340   /_objdef{Helv}%
12341   /type/dict%
12342 /OBJ pdfmark%
12343 [%
12344   {Helv}%
12345   <<%
12346     /Type/Font%
12347     /Subtype/Type1%
12348     /Name/Helv%
12349     /BaseFont/Helvetica%
12350     /Encoding{pdfDocEncoding}%
12351   >>%
12352 /PUT pdfmark%
12353 [%
12354   /_objdef{aform}%
12355   /type/dict%
12356 /OBJ pdfmark%
12357 [%
12358   /_objdef{afields}%
12359   /type/array%
12360 /OBJ pdfmark%
12361 [%
12362   /_objdef{corder}%
12363   /type/array%
12364 /OBJ pdfmark%
12365 {%
12366   [%
12367     /BBox[0 0 100 100]%
12368     /_objdef{Check}%
12369 /BP pdfmark %
12370 1 0 0 setrgbcolor%
12371 /ZapfDingbats 80 selectfont %
12372 20 20 moveto%
12373 (4)show%
12374 [/EP pdfmark%
12375 [%
12376   /BBox[0 0 100 100]%
12377   /_objdef{Cross}%
12378 /BP pdfmark %
12379 1 0 0 setrgbcolor%
12380 /ZapfDingbats 80 selectfont %
12381 20 20 moveto%
12382 (8)show%
12383 [/EP pdfmark%
12384 [%
12385   /BBox[0 0 250 100]%
12386   /_objdef{Submit}%
12387 /BP pdfmark %
12388 0.6 setgray %
12389 0 0 250 100 rectfill %
12390 1 setgray %

```

```

12391 2 2 moveto %
12392 2 98 lineto %
12393 248 98 lineto %
12394 246 96 lineto %
12395 4 96 lineto %
12396 4 4 lineto %
12397 fill %
12398 0.34 setgray %
12399 248 98 moveto %
12400 248 2 lineto %
12401 2 2 lineto %
12402 4 4 lineto %
12403 246 4 lineto %
12404 246 96 lineto %
12405 fill%
12406 /Helvetica 76 selectfont %
12407 0 setgray %
12408 8 22.5 moveto%
12409 (Submit)show%
12410 [/EP pdfmark%
12411 [%
12412 /BBox[0 0 250 100]%
12413 /_objdef{SubmitP}]%
12414 /BP pdfmark %
12415 0.6 setgray %
12416 0 0 250 100 rectfill %
12417 0.34 setgray %
12418 2 2 moveto %
12419 2 98 lineto %
12420 248 98 lineto %
12421 246 96 lineto %
12422 4 96 lineto %
12423 4 4 lineto %
12424 fill %
12425 1 setgray %
12426 248 98 moveto %
12427 248 2 lineto %
12428 2 2 lineto %
12429 4 4 lineto %
12430 246 4 lineto %
12431 246 96 lineto %
12432 fill%
12433 /Helvetica 76 selectfont %
12434 0 setgray %
12435 10 20.5 moveto%
12436 (Submit)show%
12437 [/EP pdfmark%
12438 } ?pdfmark%
12439 [%
12440 {aform}]%
12441 <<%
12442 /Fields{afields}%
12443 /DR<<%
12444 /Font<<%

```



```

12445      /ZaDb{ZaDb}%
12446      /Helv{Helv}%
12447      >>%
12448  >>%
12449  /DA(/Helv 10 Tf 0 g)%
12450  /CO{corder}%
12451  \ifHy@pdfa
12452  \else
12453      \ifHyField@NeedAppearances
12454          /NeedAppearances true%
12455      \fi
12456  \fi
12457  >>%
12458  /PUT pdfmark%
12459  [%
12460      {Catalog}%
12461      <<%
12462          /AcroForm{aform}%
12463      >>%
12464  /PUT pdfmark%
12465  ]}%
12466  \kvsetkeys{Form}{#1}%
12467  }
12468  \let\@endForm\ltx@empty
12469  \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12470  \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12471  }

12472  \newcount\HyField@AnnotCount
12473  \HyField@AnnotCount=\z@
12474  \def\HyField@AdvanceAnnotCount{%
12475      \global\advance\HyField@AnnotCount\@ne
12476  }
12477  \def\HyField@TheAnnotCount{%
12478      \the\HyField@AnnotCount
12479  }

12480  \edef\Fld@pageobjref{/P\string{ThisPage\string}}
12481  \def\HyField@AddToFields#1{%
12482      \pdfmark{%
12483          pdfmark=/APPEND,%
12484          Raw={%
12485              \string{afields\string}%
12486              \string{#1\HyField@TheAnnotCount\string}%
12487          }%
12488      }%
12489      \ifx\Fld@calculate@code\ltx@empty
12490      \else
12491          \pdfmark{%
12492              pdfmark=/APPEND,%
12493              Raw={%
12494                  \string{corder\string}%
12495                  \string{#1\HyField@TheAnnotCount\string}%
12496              }%
12497          }%

```

```

12498 \fi
12499 }

12500 \def\@TextField[#1]#2{% parameters, label
12501 \def\Fld@name{#2}%
12502 \let\Fld@default\ltx@empty
12503 \let\Fld@value\@empty
12504 \def\Fld@width{\DefaultWidthofText}%
12505 \def\Fld@height{%
12506 \ifFld@multiline
12507 \DefaultHeightofTextMultiline
12508 \else
12509 \DefaultHeightofText
12510 \fi
12511 }%
12512 \begingroup
12513 \expandafter\HyField@SetKeys\expandafter{%
12514 \DefaultOptionsofText,#1%
12515 }%
12516 \HyField@FlagsText
12517 \ifFld@hidden\def\Fld@width{1sp}\fi
12518 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12519 \HyField@AdvanceAnnotCount
12520 \LayoutTextField{#2}{%
12521 \leavevmode
12522 \Hy@escapeform\PDFForm@Text
12523 \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
12524 pdfmark=/ANN,%
12525 objdef=text\HyField@TheAnnotCount,%
12526 Raw={\PDFForm@Text}%
12527 }%
12528 }%
12529 \HyField@AddToFields{text}%
12530 \endgroup
12531 }

12532 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12533 \def\Fld@name{#2}%
12534 \let\Fld@default\relax
12535 \let\Fld@value\relax
12536 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12537 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12538 \begingroup
12539 \Fld@menulength=0 %
12540 \@tempdima\z@
12541 \@for\@curropt:=#3\do{%
12542 \expandafter\Fld@checkequals\@curropt==\%
12543 \Hy@StepCount\Fld@menulength
12544 \settowidth{\@tempdimb}{\@currDisplay}%
12545 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12546 }%
12547 \advance\@tempdima by 15\p@
12548 \begingroup
12549 \HyField@SetKeys{#1}%
12550 \edef\x{\endgroup
12551 \noexpand\expandafter

```

```

12552 \noexpand\HyField@SetKeys
12553 \noexpand\expandafter{%
12554 \expandafter\noexpand\csname DefaultOptionsof%
12555 \ifFld@radio
12556 Radio%
12557 \else
12558 \ifFld@combo
12559 \ifFld@popdown
12560 PopdownBox%
12561 \else
12562 ComboBox%
12563 \fi
12564 \else
12565 ListBox%
12566 \fi
12567 \fi
12568 \endcsname
12569 }%
12570 }\x
12571 \HyField@SetKeys{#1}%
12572 \ifFld@hidden\def\Fld@width{1sp}\fi
12573 \ifx\Fld@value\relax
12574 \let\Fld@value\Fld@default
12575 \fi
12576 \LayoutChoiceField{#2}{%
12577 \ifFld@radio
12578 \HyField@FlagsRadioButton
12579 \@@Radio{#3}%
12580 \else
12581 \begingroup
12582 \HyField@FlagsChoice
12583 \ifdim\Fld@width<\@tempdima
12584 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12585 \edef\Fld@width{\the\@tempdima}%
12586 \fi
12587 \ifFld@combo
12588 \else
12589 \@tempdima=\the\Fld@menulength\Fld@charsize
12590 \advance\@tempdima by \Fld@borderwidth bp %
12591 \advance\@tempdima by \Fld@borderwidth bp %
12592 \edef\Fld@height{\the\@tempdima}%
12593 \fi
12594 \@@ListBox{#3}%
12595 \endgroup
12596 \fi
12597 }%
12598 \endgroup
12599 }
12600 \def\@@Radio#1{%
12601 \Fld@listcount=0 %
12602 \EdefEscapeName\Fld@default{\Fld@default}%
12603 \@for\@curropt:=#1\do{%
12604 \expandafter\Fld@checkequals\@curropt==\%
12605 \EdefEscapeName\@currValue{\@currValue}%

```

```

12606 \Hy@StepCount\Fld@listcount
12607 \@currDisplay\space
12608 \Hy@escapeform\PDFForm@Radio
12609 \ifnum\Fld@listcount=1 %
12610 \HyField@AdvanceAnnotCount
12611 \fi
12612 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12613 pdfmark=/ANN,%
12614 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
12615 Raw={%
12616 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12617 }%
12618 } % deliberate space between radio buttons
12619 \ifnum\Fld@listcount=1 %
12620 \HyField@AddToFields{radio}%
12621 \fi
12622 }%
12623 }
12624 \newcount\Fld@listcount
12625 \def\@@ListBox#1{%
12626 \HyField@PDFChoices{#1}%
12627 \Hy@escapeform\PDFForm@List
12628 \HyField@AdvanceAnnotCount
12629 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12630 pdfmark=/ANN,%
12631 objdef=list\HyField@TheAnnotCount,%
12632 Raw={\PDFForm@List}%
12633 }%
12634 \HyField@AddToFields{list}%
12635 }
12636 \def\@PushButton[#1]#2{% parameters, label
12637 \def\Fld@name{#2}%
12638 \begingroup
12639 \expandafter\HyField@SetKeys\expandafter{%
12640 \DefaultOptionsofPushButton,#1%
12641 }%
12642 \ifHy@pdfa
12643 \Hy@Error{%
12644 PDF/A: Push button with JavaScript is prohibited%
12645 }\@ehc
12646 \LayoutPushButtonField{%
12647 \leavevmode
12648 \MakeButtonField{#2}%
12649 }%
12650 \else
12651 \HyField@FlagsPushButton
12652 \ifFld@hidden\def\Fld@width{1sp}\fi
12653 \HyField@AdvanceAnnotCount
12654 \LayoutPushButtonField{%
12655 \leavevmode
12656 \Hy@escapeform\PDFForm@Push
12657 \pdfmark[\MakeButtonField{#2}]{%
12658 pdfmark=/ANN,%
12659 objdef=push\HyField@TheAnnotCount,%

```

```

12660     Raw={\PDFForm@Push}%
12661     }%
12662   }%
12663   \HyField@AddToFields{push}%
12664   \fi
12665 \endgroup
12666 }
12667 \def\@Submit[#1]#2{%
12668   \def\Fld@width{\DefaultWidthofSubmit}%
12669   \def\Fld@height{\DefaultHeightofSubmit}%
12670   \begingroup
12671     \expandafter\HyField@SetKeys\expandafter{%
12672       \DefaultOptionsofSubmit,#1%
12673     }%
12674     \HyField@FlagsPushButton
12675     \HyField@FlagsSubmit
12676     \ifFld@hidden\def\Fld@width{1sp}\fi
12677     \Hy@escapeform\PDFForm@Submit
12678     \HyField@AdvanceAnnotCount
12679     \pdfmark[\MakeButtonField{#2}]{%
12680       pdfmark=/ANN,%
12681       objdef=submit\HyField@TheAnnotCount,%
12682       Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
12683     }%
12684     \HyField@AddToFields{submit}%
12685   \endgroup
12686 }
12687 \def\@Reset[#1]#2{%
12688   \def\Fld@width{\DefaultWidthofReset}%
12689   \def\Fld@height{\DefaultHeightofReset}%
12690   \begingroup
12691     \expandafter\HyField@SetKeys\expandafter{%
12692       \DefaultOptionsofReset,#1%
12693     }%
12694     \leavevmode
12695     \ifHy@pdfa
12696       \Hy@Error{%
12697         PDF/A: Reset action is prohibited%
12698       }\@ehc
12699       \MakeButtonField{#2}%
12700     \else
12701       \HyField@FlagsPushButton
12702       \ifFld@hidden\def\Fld@width{1sp}\fi
12703       \Hy@escapeform\PDFForm@Reset
12704       \HyField@AdvanceAnnotCount
12705       \pdfmark[\MakeButtonField{#2}]{%
12706         pdfmark=/ANN,%
12707         objdef=reset\HyField@TheAnnotCount,%
12708         Raw={\PDFForm@Reset}%
12709       }%
12710       \HyField@AddToFields{reset}%
12711     \fi
12712   \endgroup
12713 }%

```

```

12714 \def\@CheckBox[#1]#2{% parameters, label
12715   \def\Fld@name{#2}%
12716   \def\Fld@default{0}%
12717   \begingroup
12718     \def\Fld@width{\DefaultWidthofCheckBox}%
12719     \def\Fld@height{\DefaultHeightofCheckBox}%
12720     \expandafter\HyField@SetKeys\expandafter{%
12721       \DefaultOptionsofCheckBox,#1%
12722     }%
12723     \HyField@FlagsCheckBox
12724     \ifFld@hidden\def\Fld@width{1sp}\fi
12725     \HyField@AdvanceAnnotCount
12726     \LayoutCheckField{#2}{%
12727       \leavevmode
12728       \Hy@escapeform\PDFForm@Check
12729       \pdfmark{\MakeCheckField{\Fld@width}{\Fld@height}}{%
12730         pdfmark=/ANN,%
12731         objdef=check\HyField@TheAnnotCount,%
12732         Raw={\PDFForm@Check}%
12733       }%
12734     }%
12735     \HyField@AddToFields{check}%
12736   \endgroup
12737 }
12738 \pdfmark

```

44.2 HyperTeX

```

12739 (*hypertex)
12740 \def\@Form[#1]{%
12741   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12742 }
12743 \let\@endForm\ltx@empty
12744 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12745   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
12746 }
12747 \def\@TextField[#1]#2{% parameters, label
12748   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12749 }
12750 \def\@CheckBox[#1]#2{% parameters, label
12751   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12752 }
12753 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12754   \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12755 }
12756 \def\@PushButton[#1]#2{% parameters, label
12757   \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12758 }
12759 \def\@Reset[#1]#2{%
12760   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12761 }
12762 \def\@Submit[#1]#2{%
12763   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12764 }

```

12765 \langle /hypertex \rangle

44.3 TeX4ht

```
12766  $\langle$ *tex4ht $\rangle$ 
12767 \def\@Form[#1]{%
12768   \kvsetkeys{Form}{#1}%
12769   \HCode{<form action="\Form@action" method="\Form@method">}%
12770 }
12771 \def\@endForm{\HCode{</form>}}
12772 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12773   \Hy@Message{Sorry, TeX4ht does not support gauges}%
12774 }
12775 \def\@TextField[#1]#2{% parameters, label
12776   \let\Hy@reserved@a\@empty
12777   \def\Fld@name{#2}%
12778   \let\Fld@default\ltx@empty
12779   \bgroup
12780     \Field@toks={ }%
12781     \kvsetkeys{Field}{#1}%
12782     \HCode{<label for="\Fld@name">#2</label>}%
12783     \ifFld@password
12784       \@@PasswordField
12785     \else
12786       \@@TextField
12787     \fi
12788   \egroup
12789 }
12790 \def\@@PasswordField{%
12791   \HCode{%
12792     <input type="password" %
12793       id="\Fld@name" %
12794       name="\Fld@name" %
12795       \ifFld@hidden type="hidden" \fi
12796       value="\Fld@default" %
12797       \the\Field@toks
12798     >%
12799   }%
12800 }
12801 \def\@@TextField{%
12802   \ifFld@multiline
12803     \HCode{<textarea %
12804       \ifFld@readonly readonly \fi
12805       id="\Fld@name" %
12806       name="\Fld@name" %
12807       \ifFld@hidden type="hidden" \fi
12808       \the\Field@toks>%
12809     }%
12810     \Fld@default
12811     \HCode{</textarea>}%
12812   \else
12813     \HCode{<input type="text" %
12814       \ifFld@readonly readonly \fi
12815       id="\Fld@name" %
12816       name="\Fld@name" %
```

```

12817     \ifFld@hidden type="hidden" \fi
12818     value="\Fld@default" %
12819     \the\Field@toks>%
12820 }%
12821 \fi
12822 }
12823 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12824 \def\Fld@name{#2}%
12825 \let\Fld@default\ltx@empty
12826 \let\Hy@reserved@a\relax
12827 \begingroup
12828 \expandafter\Fld@findlength#3\\%
12829 \Field@toks={ }%
12830 \kvsetkeys{Field}{#1}%
12831 #2%
12832 \ifFld@radio
12833 \expandafter\@@Radio#3\\%
12834 \else
12835 \expandafter\@@Menu#3\\%
12836 \fi
12837 \endgroup
12838 }
12839 \def\Fld@findlength#1\\{%
12840 \Fld@menulength=0 %
12841 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12842 }
12843 \def\@@Menu#1\\{%
12844 \HCode{<select size="\the\Fld@menulength" %
12845 name="\Fld@name" %
12846 \the\Field@toks>%
12847 }%
12848 \@for\@curropt:=#1\do{%
12849 \expandafter\Fld@checkequals\@curropt==\\%
12850 \HCode{<option %
12851 \ifx\@curropt\Fld@default selected \fi
12852 value="\@currValue">\@currDisplay</option>%
12853 }%
12854 }%
12855 \HCode{</select>}%
12856 }
12857 \def\@@Radio#1\\{%
12858 \@for\@curropt:=#1\do{%
12859 \expandafter\Fld@checkequals\@curropt==\\%
12860 \HCode{<input type="radio" %
12861 \ifx\@curropt\Fld@default checked \fi
12862 name="\Fld@name" %
12863 value="\@currValue" %
12864 \the\Field@toks>%
12865 }%
12866 \@currDisplay
12867 }%
12868 }
12869 \def\@PushButton[#1]#2{% parameters, label
12870 \def\Fld@name{#2}%

```



```

12871 \bgroup
12872 \Field@toks={ }%
12873 \kvsetkeys{Field}{#1}%
12874 \HCode{<input type="button" %
12875     name="\Fld@name" %
12876     value="#2" %
12877     \the\Field@toks>%
12878 }%
12879 \HCode{</button>}%
12880 \egroup
12881 }
12882 \def\@Submit[#1]#2{%
12883 \HCode{<button type="submit">#2</button>}%
12884 }
12885 \def\@Reset[#1]#2{%
12886 \HCode{<button type="reset">#2</button>}%
12887 }
12888 \def\@CheckBox[#1]#2{% parameters, label
12889 \let\Hy@reserved@a\@empty
12890 \def\Fld@name{#2}%
12891 \def\Fld@default{0}%
12892 \bgroup
12893 \Field@toks={ }%
12894 \kvsetkeys{Field}{#1}%
12895 \HCode{<input type="checkbox" %
12896     \ifFld@checked checked \fi
12897     \ifFld@disabled disabled \fi
12898     \ifFld@readonly readonly \fi
12899     name="\Fld@name" %
12900     \ifFld@hidden type="hidden" \fi
12901     value="\Fld@default" %
12902     \the\Field@toks>%
12903     #2%
12904 }%
12905 \egroup
12906 }
12907 </tex4ht>

```

44.4 pdfTeX

```

12908 (*pdfTeX)
12909 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12910 \Hy@Message{Sorry, pdftex does not support FORM gauges}%
12911 }
12912 \def\MakeFieldObject#1#2{\sbox0{#1}%
12913 \immediate\pdfxform %
12914 \expandafter\edef\csname #2Object\endcsname{%
12915     \the\pdflastxform\space 0 R%
12916 }%
12917 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
12918 }%
12919 \let\HyField@afields\ltx@empty
12920 \let\HyField@cofields\ltx@empty
12921 \@ifundefined{pdflastlink}
12922 {}%

```

```

12923 \let\HyField@AddToFields\relax
12924 \PackageInfo{hyperref}{%
12925   You need pdfTeX 1.40.0 for setting the /Fields entry.%
12926   \MessageBreak
12927   Adobe Reader/Acrobat accepts an empty /Field array,%
12928   \MessageBreak
12929   but other PDF viewers might complain%
12930 }}%
12931 {%
12932 \let\HyField@AuxAddToFields\ltx@gobble
12933 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
12934 \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.

```

12935 \def\HyField@ABD@AuxAddToCoFields#1#2{%
12936   \begingroup
12937     \Hy@safe@activetrue
12938     \let\ltx@secondoftwo\relax
12939     \ifx\HyField@cofields\ltx@empty
12940       \xdef\HyField@cofields{%
12941         \ltx@secondoftwo{#1}{ #2 0 R}%
12942       }%
12943     \else
12944       \let\ltx@secondoftwo\relax
12945       \def\HyField@AddCoField##1##2##3{%
12946         \ifx##1\ltx@empty
12947           \ltx@secondoftwo{#1}{ #2 0 R}%
12948           \expandafter\ltx@gobble
12949         \else
12950           \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
12951             \ltx@secondoftwo{#1}{ #2 0 R}%
12952             \ltx@secondoftwo{##2}{##3}%
12953             \expandafter\expandafter\expandafter\ltx@gobble
12954           \else
12955             \ltx@secondoftwo{##2}{##3}%
12956           \fi
12957         \fi
12958         \HyField@AddCoField
12959       }%
12960       \xdef\HyField@cofields{%
12961         \expandafter\HyField@AddCoField
12962         \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
12963       }%
12964     \fi
12965   \endgroup
12966 }%
12967 \Hy@AtBeginDocument{%
12968   \if@filesw
12969     \immediate\write\@mainaux{%
12970       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
12971     }%
12972     \immediate\write\@mainaux{%
12973       \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
12974     }%

```

```

12975 \fi
12976 \let\HyField@AfterAuxOpen\@firstofone
12977 \def\HyField@AuxAddToFields#1{%
12978 \xdef\HyField@afields{%
12979 \ifx\HyField@afields\@empty
12980 \else
12981 \HyField@afields
12982 \space
12983 \fi
12984 #1 0 R%
12985 }%
12986 }%
12987 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
12988 }%
12989 \def\HyField@AddToFields{%
12990 \expandafter\HyField@@AddToFields\expandafter{%
12991 \the\pdfastlink
12992 }%
12993 \ifx\Fld@calculate@code\ltx@empty
12994 \else
12995 \begingroup
12996 \Hy@safe@activetrue
12997 \edef\Hy@temp{%
12998 \endgroup
12999 \if@filesw
13000 \write\@mainaux{%
13001 \string\HyField@AuxAddToCoFields{%
13002 \Fld@calculate@sortkey
13003 }{%
13004 \the\pdfastlink
13005 }%
13006 }%
13007 \fi
13008 }%
13009 \Hy@temp
13010 \fi
13011 }%
13012 \def\HyField@@AddToFields#1{%
13013 \HyField@AfterAuxOpen{%
13014 \if@filesw
13015 \write\@mainaux{%
13016 \string\HyField@AuxAddToFields{#1}%
13017 }%
13018 \fi
13019 }%
13020 }%
13021 }
13022 \def\@Form[#1]{%
13023 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13024 \kvsetkeys{Form}{#1}%
13025 \pdf@ifdraftmode{}{%
13026 \Hy@FormObjects
13027 \ifnum\pdfTeXversion>13 %
13028 \pdfrefobj\OBJ@pdfdocencoding

```

```

13029 \pdfrefobj\OBJ@ZaDb
13030 \pdfrefobj\OBJ@Helv
13031 \fi
13032 \AtVeryEndDocument{%
13033 \immediate\pdfobj{%
13034 <<%
13035 /Fields[\HyField@afields]%
13036 \ifx\HyField@cofields\ltx@empty
13037 \else
13038 /CO[\romannumeral-`\Q\HyField@cofields]%
13039 \fi
13040 /DR<<%
13041 /Font<<%
13042 /ZaDb \OBJ@ZaDb\space 0 R%
13043 /Helv \OBJ@Helv\space 0 R%
13044 >>%
13045 >>%
13046 /DA(/Helv 10 Tf 0 g)%
13047 \ifHy@pdfa
13048 \else
13049 \ifHyField@NeedAppearances
13050 /NeedAppearances true%
13051 \fi
13052 \fi
13053 >>%
13054 }%
13055 \edef\OBJ@acroform{\the\pdflastobj}%
13056 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13057 }%
13058 }%
13059 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13060 \begingroup
13061 \fontfamily{pzd}%
13062 \fontencoding{U}%
13063 \fontseries{m}%
13064 \fontshape{n}%
13065 \selectfont
13066 \char123 %
13067 \endgroup
13068 }{Ding}%
13069 \MakeFieldObject{%
13070 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13071 }{Submit}%
13072 \MakeFieldObject{%
13073 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13074 }{SubmitP}%
13075 }
13076 \let\@endForm\ltx@empty
13077 \let\HyAnn@AbsPageLabel\ltx@empty
13078 \let\Fld@pageobjref\ltx@empty
13079 \ltx@ifUndefined{pdfpageref}{%
13080 }{%
13081 \ltx@ifpackageloaded{zref-abspage}{%

```

```

13082 \newcount\HyAnn@Count
13083 \HyAnn@Count=\ltx@zero
13084 \def\HyAnn@AbsPageLabel{%
13085   \global\advance\HyAnn@Count by\ltx@one
13086   \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13087   \zref@refused{HyAnn@\the\HyAnn@Count}%
13088 }%
13089 \def\Fld@pageobjref{%
13090   \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13091     }{%
13092       \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13093         /P \pdfpageref
13094         \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13095         \space 0 R%
13096       }{%
13097       }%
13098     }%
13099   }%
13100 }{%
13101 }%
13102 }

13103 \def\@TextField[#1]#2{% parameters, label
13104   \def\Fld@name{#2}%
13105   \let\Fld@default\ltx@empty
13106   \let\Fld@value\@empty
13107   \def\Fld@width{\DefaultWidthofText}%
13108   \def\Fld@height{%
13109     \ifFld@multiline
13110       \DefaultHeightofTextMultiline
13111     \else
13112       \DefaultHeightofText
13113     \fi
13114   }%
13115   \begingroup
13116     \expandafter\HyField@SetKeys\expandafter{%
13117       \DefaultOptionsofText,#1%
13118     }%
13119     \PDFForm@Name
13120     \HyField@FlagsText
13121     \ifFld@hidden\def\Fld@width{1sp}\fi
13122     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13123     \LayoutTextField{#2}{%
13124       \leavevmode
13125       \HyAnn@AbsPageLabel
13126       \Hy@escapeform\PDFForm@Text
13127       \pdfstartlink user {\PDFForm@Text}\relax
13128       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13129       \HyField@AddToFields
13130     }%
13131   \endgroup
13132 }

13133 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13134   \def\Fld@name{#2}%
13135   \let\Fld@default\relax

```

```

13136 \let\Fld@value\relax
13137 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13138 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13139 \begingroup
13140 \Fld@menulength=0 %
13141 \@tempdima\z@
13142 \@for\@curropt:=#3\do{%
13143 \expandafter\Fld@checkequals\@curropt==\\%
13144 \Hy@StepCount\Fld@menulength
13145 \settowidth{\@tempdimb}{\@currDisplay}%
13146 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13147 }%
13148 \advance\@tempdima by 15\p@
13149 \begingroup
13150 \HyField@SetKeys{#1}%
13151 \edef\x{\endgroup
13152 \noexpand\expandafter
13153 \noexpand\HyField@SetKeys
13154 \noexpand\expandafter{%
13155 \expandafter\noexpand\cname DefaultOptionsof%
13156 \ifFld@radio
13157 Radio%
13158 \else
13159 \ifFld@combo
13160 \ifFld@popdown
13161 PopdownBox%
13162 \else
13163 ComboBox%
13164 \fi
13165 \else
13166 ListBox%
13167 \fi
13168 \fi
13169 \endcsname
13170 }%
13171 }\x
13172 \HyField@SetKeys{#1}%
13173 \PDFForm@Name
13174 \ifFld@hidden\def\Fld@width{1sp}\fi
13175 \ifx\Fld@value\relax
13176 \let\Fld@value\Fld@default
13177 \fi
13178 \LayoutChoiceField{#2}{%
13179 \ifFld@radio
13180 \HyField@FlagsRadioButton
13181 \@@Radio{#3}%
13182 \else
13183 \begingroup
13184 \HyField@FlagsChoice
13185 \ifdim\Fld@width<\@tempdima
13186 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13187 \edef\Fld@width{\the\@tempdima}%
13188 \fi
13189 \ifFld@combo

```

```

13190         \else
13191             \@tempdima=\the\Fld@menulength\Fld@charsize
13192             \advance\@tempdima by \Fld@borderwidth bp %
13193             \advance\@tempdima by \Fld@borderwidth bp %
13194             \edef\Fld@height{\the\@tempdima}%
13195         \fi
13196         \@@ListBox{#3}%
13197     \endgroup
13198 \fi
13199 }%
13200 \endgroup
13201 }
13202 \def\@@Radio#1{%
13203     \Fld@listcount=0 %
13204     \EdefEscapeName\Fld@default{\Fld@default}%
13205     \@for\@curropt:=#1\do{%
13206         \expandafter\Fld@checkequals\@curropt==\%
13207         \EdefEscapeName\@currValue{\@currValue}%
13208         \Hy@StepCount\Fld@listcount
13209         \@currDisplay\space
13210         \leavevmode
13211         \HyAnn@AbsPageLabel
13212         \Hy@escapeform\PDFForm@Radio
13213         \pdfstartlink user {%
13214             \PDFForm@Radio
13215             /AP<<%
13216             /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.

```

13217         /\@currValue\space \DingObject
13218         >>%
13219         >>%
13220     }%
13221     \relax
13222     \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13223     \ifnum\Fld@listcount=1 %
13224         \HyField@AddToFields
13225     \fi
13226     \space % deliberate space between radio buttons
13227 }%
13228 }
13229 \newcount\Fld@listcount
13230 \def\@@ListBox#1{%
13231     \HyField@PDFChoices{#1}%
13232     \leavevmode
13233     \HyAnn@AbsPageLabel
13234     \Hy@escapeform\PDFForm@List
13235     \pdfstartlink user {\PDFForm@List}\relax
13236     \MakeChoiceField{\Fld@width}{\Fld@height}%
13237     \pdfendlink
13238     \HyField@AddToFields
13239 }

```

```

13240 \def\@PushButton[#1]#2{% parameters, label
13241 \def\Fld@name{#2}%
13242 \begingroup
13243 \expandafter\HyField@SetKeys\expandafter{%
13244 \DefaultOptionsofPushButton,#1%
13245 }%
13246 \PDFForm@Name
13247 \ifHy@pdfa
13248 \Hy@Error{%
13249 PDF/A: Push button with JavaScript is prohibited%
13250 } \@ehc
13251 \LayoutPushButtonField{%
13252 \leavevmode
13253 \MakeButtonField{#2}%
13254 }%
13255 \else
13256 \HyField@FlagsPushButton
13257 \ifFld@hidden\def\Fld@width{1sp}\fi
13258 \LayoutPushButtonField{%
13259 \leavevmode
13260 \HyAnn@AbsPageLabel
13261 \Hy@escapeform\PDFForm@Push
13262 \pdfstartlink user {\PDFForm@Push}\relax
13263 \MakeButtonField{#2}%
13264 \pdfendlink
13265 \HyField@AddToFields
13266 }%
13267 \fi
13268 \endgroup
13269 }
13270 \def\@Submit[#1]#2{%
13271 \def\Fld@width{\DefaultWidthofSubmit}%
13272 \def\Fld@height{\DefaultHeightofSubmit}%
13273 \begingroup
13274 \expandafter\HyField@SetKeys\expandafter{%
13275 \DefaultOptionsofSubmit,#1%
13276 }%
13277 \HyField@FlagsPushButton
13278 \HyField@FlagsSubmit
13279 \ifFld@hidden\def\Fld@width{1sp}\fi
13280 \leavevmode
13281 \HyAnn@AbsPageLabel
13282 \Hy@escapeform\PDFForm@Submit
13283 \pdfstartlink user {%
13284 \PDFForm@Submit
13285 /AP<</N \SubmitObject/D \SubmitPObj>>%
13286 }%
13287 \relax
13288 \MakeButtonField{#2}%
13289 \pdfendlink
13290 \HyField@AddToFields
13291 \endgroup
13292 }
13293 \def\@Reset[#1]#2{%

```



```

13294 \def\Fld@width{\DefaultWidthofReset}%
13295 \def\Fld@height{\DefaultHeightofReset}%
13296 \begingroup
13297 \expandafter\HyField@SetKeys\expandafter{%
13298 \DefaultOptionsofReset,#1%
13299 }%
13300 \leavevmode
13301 \ifHy@pdfa
13302 \Hy@Error{%
13303 PDF/A: Reset action is prohibited%
13304 } \@ehc
13305 \MakeButtonField{#2}%
13306 \else
13307 \HyField@FlagsPushButton
13308 \ifFld@hidden\def\Fld@width{1sp}\fi
13309 \HyAnn@AbsPageLabel
13310 \Hy@escapeform\PDFForm@Reset
13311 \pdfstartlink user {\PDFForm@Reset}\relax
13312 \MakeButtonField{#2}%
13313 \pdfendlink
13314 \HyField@AddToFields
13315 \fi
13316 \endgroup
13317 }
13318 \def\@CheckBox[#1]#2{% parameters, label
13319 \def\Fld@name{#2}%
13320 \def\Fld@default{0}%
13321 \begingroup
13322 \def\Fld@width{\DefaultWidthofCheckBox}%
13323 \def\Fld@height{\DefaultHeightofCheckBox}%
13324 \expandafter\HyField@SetKeys\expandafter{%
13325 \DefaultOptionsofCheckBox,#1%
13326 }%
13327 \PDFForm@Name
13328 \HyField@FlagsCheckBox
13329 \ifFld@hidden\def\Fld@width{1sp}\fi
13330 \LayoutCheckField{#2}{%
13331 \leavevmode
13332 \HyAnn@AbsPageLabel
13333 \Hy@escapeform\PDFForm@Check
13334 \pdfstartlink user {\PDFForm@Check}\relax
13335 \MakeCheckField{\Fld@width}{\Fld@height}%
13336 \pdfendlink
13337 \HyField@AddToFields
13338 }%
13339 \endgroup
13340 }
13341 \def\Hy@FormObjects{%
13342 \pdfobj {%
13343 <<%
13344 /Type/Encoding%
13345 /Differences[%
13346 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13347 /ring/tilde %

```

13348 39/quotesingle %
13349 96/grave %
13350 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13351 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13352 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13353 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13354 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13355 160/Euro %
13356 164/currency %
13357 166/brokenbar %
13358 168/dieresis/copyright/ordfeminine %
13359 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13360 /twosuperior/threesuperior/acute/mu %
13361 183/periodcentered/cedilla/onesuperior/ordmasculine %
13362 188/onequarter/onehalf/threequarters %
13363 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13364 /Cedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13365 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13366 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13367 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13368 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13369 /cedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13370 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13371 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13372 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13373]%
13374 >>%
13375 }%
13376 \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13377 \pdfobj{%
13378 <<%
13379 /Type/Font%
13380 /Subtype/Type1%
13381 /Name/ZaDb%
13382 /BaseFont/ZapfDingbats%
13383 >>%
13384 }%
13385 \xdef\OBJ@ZaDb{\the\pdfastobj}%
13386 \pdfobj{%
13387 <<%
13388 /Type/Font%
13389 /Subtype/Type1%
13390 /Name/Helv%
13391 /BaseFont/Helvetica%
13392 /Encoding \OBJ@pdfdocencoding\space 0 R%
13393 >>%
13394 }%
13395 \xdef\OBJ@Helv{\the\pdfastobj}%
13396 \global\let\Hy@FormObjects\relax
13397 }
13398 (/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.

```
13399 <*dvipdfm | xetex>
```

```
\@Gauge
```

```
13400 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13401   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13402 }
```

```
\@Form
```

```
13403 \def\@Form[#1]{%
13404   \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
13405   \kvsetkeys{Form}{#1}%
13406   \Hy@FormObjects
13407   \@pdfm@mark{obj @afields []}%
13408   \@pdfm@mark{obj @corder []}%
13409   \@pdfm@mark{%
13410     obj @aform <<%
13411       /Fields @afields%
13412       /DR<<%
13413       /Font<<%
13414       /ZaDb @OBJZaDb%
13415       /Helv @OBJHelv%
13416       >>%
13417       >>%
13418       /DA(/Helv 10 Tf 0 g)%
13419       /CO @corder%
13420       \ifHy@pdfa
13421       \else
13422         \ifHyField@NeedAppearances
13423         /NeedAppearances true%
13424         \fi
13425         \fi
13426       >>%
13427     }%
13428   \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13429 }
```

```
\@endForm
```

```
13430 \let\@endForm\ltx@empty
```

```
\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
```

```
13431 \def\dvipdfm@setdim{%
13432   height \the\ht\pdfm@box\space
13433   width \the\wd\pdfm@box\space
13434   depth \the\dp\pdfm@box\space
13435 }
```

```
\HyField@AnnotCount
```

```
13436 \newcount\HyField@AnnotCount
13437 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
13438 \def\HyField@AdvanceAnnotCount{%
13439   \global\advance\HyField@AnnotCount\@ne
13440 }
```

\HyField@TheAnnotCount

```
13441 \def\HyField@TheAnnotCount{%
13442   \the\HyField@AnnotCount
13443 }
```

\Fld@pageobjref

```
13444 \def\Fld@pageobjref{/P @thispage}%
```

\HyField@AddToFields

```
13445 \def\HyField@AddToFields#1{%
13446   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
13447   \ifx\Fld@calculate@code\ltx@empty
13448   \else
13449     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
13450   \fi
13451 }
```

\@TextField

```
13452 \def\@TextField[#1]#2{% parameters, label
13453   \def\Fld@name{#2}%
13454   \let\Fld@default\ltx@empty
13455   \let\Fld@value\@empty
13456   \def\Fld@width{\DefaultWidthofText}%
13457   \def\Fld@height{%
13458     \ifFld@multiline
13459       \DefaultHeightofTextMultiline
13460     \else
13461       \DefaultHeightofText
13462     \fi
13463   }%
13464   \begingroup
13465     \expandafter\HyField@SetKeys\expandafter{%
13466       \DefaultOptionsofText,#1%
13467     }%
13468     \PDFForm@Name
13469     \HyField@FlagsText
13470     \ifFld@hidden\def\Fld@width{1sp}\fi
13471     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13472     \setbox\pdfm@box=\hbox{%
13473       \MakeTextField{\Fld@width}{\Fld@height}%
13474     }%
13475     \HyField@AdvanceAnnotCount
13476     \LayoutTextField{#2}{%
13477       \leavevmode
13478       \Hy@escapeform\PDFForm@Text
13479       \@pdfm@mark{%
13480         ann @text\HyField@TheAnnotCount\space
13481         \dvi pdfm@setdim << \PDFForm@Text >>%

```

```

13482 }%
13483 }%
13484 \unhbox\pdfm@box
13485 \HyField@AddToFields{text}%
13486 % record in @afields array
13487 \endgroup
13488 }

```

\@ChoiceMenu

```

13489 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13490 \def\Fld@name{#2}%
13491 \let\Fld@default\relax
13492 \let\Fld@value\relax
13493 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13494 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13495 \begingroup
13496 \Fld@menulength=0 %
13497 \@tempdima\z@
13498 \@for\@curropt:=#3\do{%
13499 \expandafter\Fld@checkequals\@curropt==\\%
13500 \Hy@StepCount\Fld@menulength
13501 \settowidth{\@tempdimb}{\@currDisplay}%
13502 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13503 }%
13504 \advance\@tempdima by 15\p@
13505 \begingroup
13506 \HyField@SetKeys{#1}%
13507 \edef\x{\endgroup
13508 \noexpand\expandafter
13509 \noexpand\HyField@SetKeys
13510 \noexpand\expandafter{%
13511 \expandafter\noexpand\curname DefaultOptionsof%
13512 \ifFld@radio
13513 Radio%
13514 \else
13515 \ifFld@combo
13516 \ifFld@popdown
13517 PopdownBox%
13518 \else
13519 ComboBox%
13520 \fi
13521 \else
13522 ListBox%
13523 \fi
13524 \fi
13525 \endcurname
13526 }%
13527 }\x
13528 \HyField@SetKeys{#1}%
13529 \PDFForm@Name
13530 \ifFld@hidden\def\Fld@width{1sp}\fi
13531 \ifx\Fld@value\relax
13532 \let\Fld@value\Fld@default
13533 \fi

```

```

13534 \LayoutChoiceField{#2}{%
13535 \ifFld@radio
13536 \HyField@FlagsRadioButton
13537 \@@Radio{#3}%
13538 \else
13539 \begingroup
13540 \HyField@FlagsChoice
13541 \ifdim\Fld@width<\@tempdima
13542 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13543 \edef\Fld@width{\the\@tempdima}%
13544 \fi
13545 \ifFld@combo
13546 \else
13547 \@tempdima=\the\Fld@menulength\Fld@charsize
13548 \advance\@tempdima by \Fld@borderwidth bp %
13549 \advance\@tempdima by \Fld@borderwidth bp %
13550 \edef\Fld@height{\the\@tempdima}%
13551 \fi
13552 \@@ListBox{#3}%
13553 \endgroup
13554 \fi
13555 }%
13556 \endgroup
13557 }

\@@Radio
13558 \def\@@Radio#1{%
13559 \Fld@listcount=0 %
13560 \EdefEscapeName\Fld@default{\Fld@default}%
13561 \setbox\pdfm@box=\hbox{%
13562 \MakeRadioField{\Fld@width}{\Fld@height}%
13563 }%
13564 \@for\@curropt:=#1\do{%
13565 \expandafter\Fld@checkequals\@curropt==\%
13566 \EdefEscapeName\@currValue{\@currValue}%
13567 \Hy@StepCount\Fld@listcount
13568 \@currDisplay\space
13569 \leavevmode
13570 \Hy@escapeform\PDFForm@Radio
13571 \ifnum\Fld@listcount=1 %
13572 \HyField@AdvanceAnnotCount
13573 \fi
13574 \@pdfm@mark{%
13575 ann %
13576 \ifnum\Fld@listcount=1 %
13577 @radio\HyField@TheAnnotCount%
13578 \space
13579 \fi
13580 \dvi pdfm@setdim
13581 <<%
13582 \PDFForm@Radio
13583 /AP<</N<</\@currValue /null>>>>%
13584 >>%
13585 }%

```

```

13586 \unhcopy\pdfm@box\space% deliberate space between radio buttons
13587 \ifnum\Fld@listcount=1 %
13588 \HyField@AddToFields{radio}%
13589 \fi
13590 }%
13591 }

\Fld@listcount
13592 \newcount\Fld@listcount

\@@Listbox
13593 \def\@@Listbox#1{%
13594 \HyField@PDFChoices{#1}%
13595 \setbox\pdfm@box=\hbox{%
13596 \MakeChoiceField{\Fld@width}{\Fld@height}%
13597 }%
13598 \leavevmode
13599 \Hy@escapeform\PDFForm@List
13600 \HyField@AdvanceAnnotCount
13601 \@pdfm@mark{%
13602 ann @list\HyField@TheAnnotCount\space
13603 \dvi pdfm@setdim
13604 <<\PDFForm@List>>%
13605 }%
13606 \unhbox\pdfm@box
13607 \HyField@AddToFields{list}%
13608 }

\@PushButton
13609 \def\@PushButton[#1]#2{% parameters, label
13610 \def\Fld@name{#2}%
13611 \begingroup
13612 \expandafter\HyField@SetKeys\expandafter{%
13613 \DefaultOptionsofPushButton,#1%
13614 }%
13615 \PDFForm@Name
13616 \ifHy@pdfa
13617 \Hy@Error{%
13618 PDF/A: Push button with JavaScript is prohibited%
13619 }\@ehc
13620 \LayoutPushButtonField{%
13621 \leavevmode
13622 \MakeButtonField{#2}%
13623 }%
13624 \else
13625 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13626 \HyField@FlagsPushButton
13627 \ifFld@hidden\def\Fld@width{1sp}\fi
13628 \HyField@AdvanceAnnotCount
13629 \LayoutPushButtonField{%
13630 \leavevmode
13631 \Hy@escapeform\PDFForm@Push
13632 \@pdfm@mark{%
13633 ann @push\HyField@TheAnnotCount\space

```

```

13634      \dvipdfm@setdim
13635      <<\PDFForm@Push>>%
13636      }%
13637      }%
13638      \unhbox\pdfm@box
13639      \HyField@AddToFields{push}%
13640      \fi
13641      \endgroup
13642      }

\@Submit
13643      \def\@Submit[#1]#2{%
13644      \def\Fld@width{\DefaultWidthofSubmit}%
13645      \def\Fld@height{\DefaultHeightofSubmit}%
13646      \begingroup
13647      \expandafter\HyField@SetKeys\expandafter{%
13648      \DefaultOptionsofSubmit,#1%
13649      }%
13650      \HyField@FlagsPushButton
13651      \HyField@FlagsSubmit
13652      \ifFld@hidden\def\Fld@width{1sp}\fi
13653      \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13654      \leavevmode
13655      \Hy@escapeform\PDFForm@Submit
13656      \HyField@AdvanceAnnotCount
13657      \@pdfm@mark{%
13658      ann @submit\HyField@TheAnnotCount\space
13659      \dvipdfm@setdim
13660      <<\PDFForm@Submit>>%
13661      }%
13662      \unhbox\pdfm@box%
13663      \HyField@AddToFields{submit}%
13664      \endgroup
13665      }

\@Reset
13666      \def\@Reset[#1]#2{%
13667      \def\Fld@width{\DefaultWidthofReset}%
13668      \def\Fld@height{\DefaultHeightofReset}%
13669      \begingroup
13670      \expandafter\HyField@SetKeys\expandafter{%
13671      \DefaultOptionsofReset,#1%
13672      }%
13673      \leavevmode
13674      \ifHy@pdfa
13675      \Hy@Error{%
13676      PDF/A: Reset action is prohibited%
13677      }\@ehc
13678      \MakeButtonField{#2}%
13679      \else
13680      \HyField@FlagsPushButton
13681      \ifFld@hidden\def\Fld@width{1sp}\fi
13682      \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13683      \Hy@escapeform\PDFForm@Reset

```



```

13684 \HyField@AdvanceAnnotCount
13685 \@pdfm@mark{%
13686 ann @reset\HyField@TheAnnotCount\space
13687 \dvipdfm@setdim
13688 <<\PDFForm@Reset>>%
13689 }%
13690 \unhbox\pdfm@box
13691 \HyField@AddToFields{reset}%
13692 \fi
13693 \endgroup
13694 }

\@CheckBox
13695 \def\@CheckBox[#1]#2{% parameters, label
13696 \def\Fld@name{#2}%
13697 \def\Fld@default{0}%
13698 \begingroup
13699 \def\Fld@width{\DefaultWidthofCheckBox}%
13700 \def\Fld@height{\DefaultHeightofCheckBox}%
13701 \expandafter\HyField@SetKeys\expandafter{%
13702 \DefaultOptionsofCheckBox,#1%
13703 }%
13704 \PDFForm@Name
13705 \HyField@FlagsCheckBox
13706 \ifFld@hidden\def\Fld@width{1sp}\fi
13707 \setbox\pdfm@box=\hbox{%
13708 \MakeCheckField{\Fld@width}{\Fld@height}%
13709 }%
13710 \HyField@AdvanceAnnotCount
13711 \LayoutCheckField{#2}{%
13712 \leavevmode
13713 \Hy@escapeform\PDFForm@Check
13714 \@pdfm@mark{%
13715 ann @check\HyField@TheAnnotCount\space
13716 \dvipdfm@setdim
13717 <<\PDFForm@Check>>%
13718 }%
13719 \unhbox\pdfm@box
13720 \HyField@AddToFields{check}%
13721 }%
13722 \endgroup
13723 }

13724 \def\Hy@FormObjects{%
13725 \@pdfm@mark{obj @OBJpdfdocencoding%
13726 <<%
13727 /Type/Encoding%
13728 /Differences[%
13729 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13730 39/quotesingle %
13731 96/grave %
13732 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13733 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13734 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%

```

13735 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
 13736 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
 13737 160/Euro %
 13738 164/currency %
 13739 166/brokenbar %
 13740 168/dieresis/copyright/ordfeminine %
 13741 172/logicalnot/.notdef/registered/macron/degree/plusminus%
 13742 /twosuperior/threesuperior/acute/mu %
 13743 183/periodcentered/cedilla/onesuperior/ordmasculine %
 13744 188/onequarter/onehalf/threequarters %
 13745 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
 13746 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
 13747 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
 13748 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
 13749 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
 13750 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
 13751 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
 13752 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
 13753 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
 13754 /thorn/ydieresis%
 13755]%
 13756 >>%
 13757 }%
 13758 \@pdfm@mark{obj @OBJZaDb%
 13759 <<%
 13760 /Type/Font%
 13761 /Subtype/Type1%
 13762 /Name/ZaDb%
 13763 /BaseFont/ZapfDingbats%
 13764 >>%
 13765 }%
 13766 \@pdfm@mark{obj @OBJHelv%
 13767 <<%
 13768 /Type/Font%
 13769 /Subtype/Type1%
 13770 /Name/Helv%
 13771 /BaseFont/Helvetica%
 13772 /Encoding @OBJpdfdocencoding%
 13773 >>%
 13774 }%
 13775 \global\let\Hy@FormObjects\relax
 13776 }
 13777 </dvipdfm | xetex>

44.6 Common forms part

13778 (*pdfform)
 \Fld@pageobjref
 13779 \providecommand*{\Fld@pageobjref}{}
 \Hy@escapestring
 13780 \@ifundefined{pdf@escapestring}
 13781 {%

```

13782 \let\Hy@escapestring\@firstofone
13783 \def\Hy@escapeform#1{%
13784   \ifHy@pdfescapeform
13785     \def\Hy@escapestring##1{%
13786       \noexpand\Hy@escapestring{\noexpand##1}%
13787     }%
13788     \edef\Hy@temp{#1}%
13789     \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
13790   \def\Hy@escapestring##1{%
13791     \@ifundefined{Hy@esc@\string##1}{%
13792       ##1%
13793       \ThisShouldNotHappen
13794     }{%
13795       \csname Hy@esc@\string##1\endcsname
13796     }%
13797   }%
13798 \else
13799   \let\Hy@escapestring\@firstofone
13800 \fi
13801 }%
13802 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
13803   \ifx\#3\%
13804   \else
13805     \expandafter
13806     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13807     \ltx@ReturnAfterFi{%
13808       \Hy@@@escapeform#3\@nil
13809     }%
13810   \fi
13811 }%
13812 }{%
13813 \def\Hy@escapeform#1{%
13814   \ifHy@pdfescapeform
13815     \let\Hy@escapestring\pdfescapestring
13816   \else
13817     \let\Hy@escapestring\@firstofone
13818   \fi
13819 }%
13820 \Hy@escapeform{}%
13821 }

```

\PDFForm@Name

```

13822 \def\PDFForm@Name{%
13823   \PDFForm@@Name\Fld@name
13824   \ifx\Fld@altname\relax
13825   \else
13826     \PDFForm@@Name\Fld@altname
13827   \fi
13828   \ifx\Fld@mappingname\relax
13829   \else
13830     \PDFForm@@Name\Fld@mappingname
13831   \fi
13832 }

```

\PDFForm@@Name

```
13833 \def\PDFForm@@Name#1{%
13834 \begingroup
13835 \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
13836 \ifHy@unicode
13837 \Hy@unicodedefalse
13838 \fi
13839 \fi
13840 \pdfstringdef\Hy@gtemp#1%
13841 \endgroup
13842 \let#1\Hy@gtemp
13843 }
```

\Fld@additionalactions

```
13844 \def\Fld@@additionalactions{%
K input (keystroke) format
13845 \ifx\Fld@keystroke@code\@empty
13846 \else
13847 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13848 \fi
F display format
13849 \ifx\Fld@format@code\@empty
13850 \else
13851 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13852 \fi
V validation
13853 \ifx\Fld@validate@code\@empty
13854 \else
13855 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13856 \fi
C calculation
13857 \ifx\Fld@calculate@code\@empty
13858 \else
13859 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13860 \fi
Fo receiving the input focus
13861 \ifx\Fld@onfocus@code\@empty
13862 \else
13863 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13864 \fi
Bl loosing the input focus (blurred)
13865 \ifx\Fld@onblur@code\@empty
13866 \else
13867 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13868 \fi
D pressing the mouse button (down)
13869 \ifx\Fld@onmousedown@code\@empty
13870 \else
13871 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13872 \fi
```

U releasing the mouse button (up)

```
13873 \ifx\Fld@onmouseup@code\@empty
13874 \else
13875 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13876 \fi
```

E cursor enters the annotation's active area.

```
13877 \ifx\Fld@onenter@code\@empty
13878 \else
13879 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13880 \fi
```

X cursor exits the annotation's active area.

```
13881 \ifx\Fld@onexit@code\@empty
13882 \else
13883 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13884 \fi
```

```
13885 }
13886 \def\Fld@additionalactions{%
13887 \if-\Fld@@additionalactions-%
13888 \else
13889 \ifHy@pdfa
13890 \else
13891 /AA<<\Fld@@additionalactions>>%
13892 \fi
13893 \fi
13894 }
```

\Fld@annotnames

```
13895 \def\Fld@annotnames{%
13896 /T(\Fld@name)%
13897 \ifx\Fld@altname\relax
13898 \else
13899 /TU(\Fld@altname)%
13900 \fi
13901 \ifx\Fld@mappingname\relax
13902 \else
13903 /TM(\Fld@mappingname)%
13904 \fi
13905 }
```

\PDFForm@Check

```
13906 \def\PDFForm@Check{%
13907 /Subtype/Widget%
13908 \Fld@annotflags
13909 \Fld@pageobjref
13910 \Fld@annotnames
13911 /FT/Btn%
13912 \Fld@flags
13913 /Q \Fld@align
13914 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13915 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
13916 /MK<<%
13917 \ifnum\Fld@rotation=z@
```

```

13918 \else
13919 /R \Fld@rotation
13920 \fi
13921 \ifx\Fld@bordercolor\relax
13922 \else
13923 /BC[\Fld@bordercolor]%
13924 \fi
13925 \ifx\Fld@bcolor\relax
13926 \else
13927 /BG[\Fld@bcolor]%
13928 \fi
13929 /CA(\Hy@escapestring{\Fld@cbsymbol})%
13930 >>%
13931 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13932 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13933 /H/P%
13934 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
13935 \Fld@additionalactions
13936 }

```

\PDFForm@Push

```

13937 \ifHy@pdfa
13938 \else
13939 \def\PDFForm@Push{%
13940 /Subtype/Widget%
13941 \Fld@annotflags
13942 \Fld@pageobjref
13943 \Fld@annotnames
13944 /FT/Btn%
13945 \Fld@flags
13946 /H/P%
13947 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13948 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13949 \ifx\Fld@bordercolor\relax\else 1\fi
13950 \space
13951 \else
13952 /MK<<%
13953 \ifnum\Fld@rotation=\z@
13954 \else
13955 /R \Fld@rotation
13956 \fi
13957 \ifx\Fld@bordercolor\relax
13958 \else
13959 /BC[\Fld@bordercolor]%
13960 \fi
13961 >>%
13962 \fi
13963 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
13964 \Fld@additionalactions
13965 }%
13966 \fi

```

\PDFForm@List

```

13967 \def\PDFForm@List{%

```

```

13968 /Subtype/Widget%
13969 \Fld@annotflags
13970 \Fld@pageobjref
13971 \Fld@annotnames
13972 /FT/Ch%
13973 \Fld@flags
13974 /Q \Fld@align
13975 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13976 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13977     \ifx\Fld@bordercolor\relax\else 1\fi
13978     \ifx\Fld@bcolor\relax \else 1\fi
13979     \space
13980 \else
13981 /MK<<%
13982     \ifnum\Fld@rotation=\z@
13983     \else
13984     /R \Fld@rotation
13985     \fi
13986     \ifx\Fld@bordercolor\relax
13987     \else
13988     /BC[\Fld@bordercolor]%
13989     \fi
13990     \ifx\Fld@bcolor\relax
13991     \else
13992     /BG[\Fld@bcolor]%
13993     \fi
13994 >>%
13995 \fi
13996 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
13997     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13998 \Fld@choices
13999 \Fld@additionalactions
14000 }

```

\PDFForm@Radio

```

14001 \def\PDFForm@Radio{%
14002 /Subtype/Widget%
14003 \Fld@annotflags
14004 \Fld@pageobjref
14005 \Fld@annotnames
14006 /FT/Btn%
14007 \Fld@flags
14008 /H/P%
14009 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14010 /MK<<%
14011     \ifnum\Fld@rotation=\z@
14012     \else
14013     /R \Fld@rotation
14014     \fi
14015     \ifx\Fld@bordercolor\relax
14016     \else
14017     /BC[\Fld@bordercolor]%
14018     \fi
14019     \ifx\Fld@bcolor\relax

```

```

14020 \else
14021 /BG[\Fld@bcolor]%
14022 \fi
14023 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14024 >>%
14025 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14026 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14027 \ifx\Fld@default\@empty
14028 /V/Off%
14029 /DV/Off%
14030 \else
14031 /V/\Fld@default
14032 /DV/\Fld@default
14033 \fi
14034 \Fld@additionalactions
14035 }

```

\PDFForm@Text

```

14036 \def\PDFForm@Text{%
14037 /Subtype/Widget%
14038 \Fld@annotflags
14039 \Fld@pageobjref
14040 \Fld@annotnames
14041 /FT/Tx%
14042 \Fld@flags
14043 /Q \Fld@align
14044 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14045 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14046 \ifx\Fld@bordercolor\relax\else 1\fi
14047 \ifx\Fld@bcolor\relax \else 1\fi
14048 \space
14049 \else
14050 /MK<<%
14051 \ifnum\Fld@rotation=\z@
14052 \else
14053 /R \Fld@rotation
14054 \fi
14055 \ifx\Fld@bordercolor\relax
14056 \else
14057 /BC[\Fld@bordercolor]%
14058 \fi
14059 \ifx\Fld@bcolor\relax
14060 \else
14061 /BG[\Fld@bcolor]%
14062 \fi
14063 >>%
14064 \fi
14065 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14066 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14067 /DV(\Hy@escapestring{\Fld@default})%
14068 /V(\Hy@escapestring{\Fld@value})%
14069 \Fld@additionalactions

```



```

14070 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14071 }

```

\PDFForm@Submit

```

14072 \def\PDFForm@Submit{%
14073   /Subtype/Widget%
14074   \Fld@annotflags
14075   \Fld@pageobjref
14076   \Fld@annotnames
14077   /FT/Btn%
14078   \Fld@flags
14079   /H/P%
14080   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14081   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14082     \ifx\Fld@bordercolor\relax\else 1\fi
14083     \space
14084   \else
14085     /MK<<%
14086     \ifnum\Fld@rotation=\z@
14087     \else
14088       /R \Fld@rotation
14089     \fi
14090     \ifx\Fld@bordercolor\relax
14091     \else
14092       /BC[\Fld@bordercolor]%
14093     \fi
14094     >>%
14095   \fi
14096   /A<<%
14097   /S/SubmitForm%
14098   /F<<%
14099   /FS/URL%
14100   /F(\Hy@escapestring{\Form@action})%
14101   >>%
14102   \Fld@submitflags
14103   >>%
14104   \Fld@additionalactions
14105 }

```

\PDFForm@Reset

```

14106 \ifHy@pdfa
14107 \else
14108 \def\PDFForm@Reset{%
14109   /Subtype/Widget%
14110   \Fld@annotflags
14111   \Fld@pageobjref
14112   \Fld@annotnames
14113   /FT/Btn%
14114   \Fld@flags
14115   /H/P%
14116   /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14117   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14118     \ifx\Fld@bordercolor\relax\else 1\fi
14119     \space

```

```

14120 \else
14121 /MK<<%
14122 \ifnum\Fld@rotation=\z@
14123 \else
14124 /R \Fld@rotation
14125 \fi
14126 \ifx\Fld@bordercolor\relax
14127 \else
14128 /BC[\Fld@bordercolor]%
14129 \fi
14130 % /CA (Clear)
14131 % /AC (Done)
14132 >>%
14133 \fi
14134 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14135 /A<</S/ResetForm>>%
14136 \Fld@additionalactions
14137 }%
14138 \fi

14139 </pdfform>
14140 <*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`

```

14141 \def\phantomsection{%
14142 \Hy@MakeCurrentHrefAuto{section*}%
14143 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14144 }
14145 </packageEnd>

```

45.1 Bookmarks

```
14146 <*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on $\varepsilon\text{-TeX}$, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of $\varepsilon\text{-TeX}$'s implementation (that it processes the shipped out

lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```

14147 \def\Hy@writebookmark#1#2#3#4#5{%
14148   % section number, text, label, level, file
14149   \ifx\WriteBookmarks\relax%
14150   \else
14151     \ifnum#4>\Hy@bookmarksdepth\relax
14152     \else
14153       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
14154     \fi
14155   \fi
14156 }
14157 \def\Hy@currentbookmarklevel{0}
14158 \def\Hy@numberline#1{#1 }
14159 \def\@@@writetorep#1#2#3#4#5{%
14160   \begingroup
14161     \edef\Hy@tempa{#5}%
14162     \ifx\Hy@tempa\Hy@bookmarkstype
14163       \edef\Hy@level{#4}%
14164       \ifx\Hy@levelcheck Y%
14165         \@tempcnta\Hy@level\relax
14166         \advance\@tempcnta by -1 %
14167         \ifnum\Hy@currentbookmarklevel<\@tempcnta
14168           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14169           \advance\@tempcnta by 1 %
14170           \Hy@Warning{%
14171             Difference (\the\@tempcnta) between bookmark levels is %
14172             greater \MessageBreak than one, level fixed%
14173           }%
14174           \@tempcnta\Hy@currentbookmarklevel
14175           \advance\@tempcnta by 1 %
14176           \edef\Hy@level{\the\@tempcnta}%
14177         \fi
14178       \else
14179         \global\let\Hy@levelcheck Y%
14180       \fi
14181       \global\let\Hy@currentbookmarklevel\Hy@level
14182       \@tempcnta\Hy@level\relax
14183       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14184       \advance\@tempcnta by -1 %
14185       \edef\Hy@tempa{#3}%
14186       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14187       \ifx\Hy@tempa\Hy@tempb
14188         \Hy@Warning{%
14189           The anchor of a bookmark and its parent's must not%
14190           \MessageBreak be the same. Added a new anchor%
14191         }%
14192       \phantomsection

```

```

14193 \fi
14194 \ifHy@bookmarksnumbered
14195 \let\numberline\Hy@numberline
14196 \let\booknumberline\Hy@numberline
14197 \let\partnumberline\Hy@numberline
14198 \let\chapternumberline\Hy@numberline
14199 \else
14200 \let\numberline\@gobble
14201 \let\booknumberline\@gobble
14202 \let\partnumberline\@gobble
14203 \let\chapternumberline\@gobble
14204 \fi
14205 \pdfstringdef\Hy@tempa{#2}%
14206 \HyPsd@SanitizeForOutFile\Hy@tempa
14207 \if@filesw
14208 \stepcounter{bookmark@seq@number}%
14209 \@ifundefined{@outlinefile}{%
14210 }{%
14211 \protected@write\@outlinefile{ }{%
14212 \protect\BOOKMARK
14213 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14214 {\Hy@tempa}{\Hy@tempb}%
14215 \@percentchar\space\thebookmark@seq@number
14216 }%
14217 }%
14218 \fi
14219 \fi
14220 \endgroup
14221 }
14222 \newcounter{bookmark@seq@number}

14223 \begingroup
14224 \lccode`=(`{
14225 \lccode`=)`}%
14226 \lccode`1=\z@
14227 \lccode`2=\z@
14228 \lccode`3=\z@
14229 \lccode`5=\z@
14230 \lccode`7=\z@
14231 \lccode`#= \z@
14232 \lccode```= \z@
14233 \lccode`\{= \z@
14234 \lccode`\}= \z@
14235 \lowercase{%
14236 \endgroup
14237 \def\HyPsd@SanitizeForOutFile#1{%
14238 \@onelevel@sanitize\Hy@tempa
14239 \escapechar`\\%
14240 \edef\Hy@tempa{%
14241 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
14242 }%
14243 \edef\Hy@tempa{%
14244 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14245 }%
14246 }%

```

```

14247 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14248   #1%
14249   \ifx\|#2\|%
14250     \expandafter\ltx@gobble
14251   \else
14252     \expandafter\ltx@firstofone
14253   \fi
14254   {%
14255     \string\173%
14256     \HyPsd@SanitizeOut@BraceLeft#2\@nil
14257   }%
14258 }%
14259 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14260   #1%
14261   \ifx\|#2\|%
14262     \expandafter\ltx@gobble
14263   \else
14264     \expandafter\ltx@firstofone
14265   \fi
14266   {%
14267     \string\175%
14268     \HyPsd@SanitizeOut@BraceRight#2\@nil
14269   }%
14270 }%
14271 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14272 \newcommand{\currentpdfbookmark}{%
14273   \pdfbookmark[\Hy@currentbookmarklevel]%
14274 }
14275 \newcommand{\subpdfbookmark}{%
14276   \@tempcnta\Hy@currentbookmarklevel
14277   \Hy@StepCount\@tempcnta
14278   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14279 }
14280 \newcommand{\belowpdfbookmark}[2]{%
14281   \@tempcnta\Hy@currentbookmarklevel
14282   \Hy@StepCount\@tempcnta
14283   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14284   \advance\@tempcnta by -1 %
14285   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14286 }

```

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.

```

14287 \renewcommand\pdfbookmark[3][0]{%
14288   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
14289   \hyper@anchorstart{#3.#1}\hyper@anchorend
14290 }
14291 \def\BOOKMARK{%
14292   \ifnextchar{\@BOOKMARK}{\@BOOKMARK[1][-]}%
14293 }

```

```

14294 \def\@BOOKMARK[#1]{%
14295   \@ifnextchar[{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
14296 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the texinfo.pdf macros.

45.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14297 \RequirePackage{rerunfilecheck}[2009/12/10]
14298 \def\Hy@OutlineRerunCheck{%
14299   \RerunFileCheck{jobname.out}{%
14300     \immediate\closeout\@outlinefile
14301   }{%
14302     Rerun to get outlines right\MessageBreak
14303     or use package `bookmark'%
14304   }%
14305 }

```

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.

```

14306 (*vtex)
14307 \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.

```

14308 \begingroup
14309   \catcode\`=12 %
14310   \ifnum\Hy@VTeXversion<650 %
14311     \catcode\`=12 %
14312     \gdef\hv@pdf@char#1#2#3{%
14313       \char
14314       \ifcase'#1#2#3 %
14315         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14316         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14317         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14318         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14319         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14320         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14321         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14322         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14323         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14324         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14325         \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14326         \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14327         \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14328         \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14329         \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%

```

```

14330 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14331 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14332 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14333 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14334 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14335 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14336 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14337 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
14338 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14339 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14340 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14341 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14342 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14343 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14344 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14345 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14346 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14347 \fi
14348 }%
14349 \else
14350 \gdef\hv@pdf@char{\char'}%
14351 \fi
14352 \endgroup

```

\@@BOOKMARK

```

14353 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14354 \expandafter\edef\csname @count@#3\endcsname{%
14355 \the\@serial@counter
14356 }%
14357 \edef\@mycount{\the\@serial@counter}%
14358 \Hy@StepCount\@serial@counter
14359 \edef\@parcount{%
14360 \expandafter\ifx\csname @count@#5\endcsname\relax
14361 0%
14362 \else
14363 \csname @count@#5\endcsname
14364 \fi
14365 }%
14366 \immediate\special{%
14367 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14368 s=\ifx#2-c\else o\fi,t=#4%
14369 }%
14370 }%

```

\ReadBookmarks

```

14371 \def\ReadBookmarks{%
14372 \begingroup
14373 \def\0{\hv@pdf@char 0}%
14374 \def\1{\hv@pdf@char 1}%
14375 \def\2{\hv@pdf@char 2}%
14376 \def\3{\hv@pdf@char 3}%
14377 \def\{({}%
14378 \def\)}{)%
14379 \def\do##1{%

```

```

14380 \ifnum\catcode`###1=\active
14381 \@makeother###1%
14382 \else
14383 \ifnum\catcode`###1=6 %
14384 \@makeother###1%
14385 \fi
14386 \fi
14387 }%
14388 \dospecials
14389 \Hy@safe@activetrue
14390 \InputIfFileExists{\jobname.out}{\{}}%
14391 \endgroup
14392 \ifx\WriteBookmarks\relax
14393 \else
14394 \if@filesw
14395 \newwrite\@outlinefile
14396 \Hy@OutlineRerunCheck
14397 \immediate\openout\@outlinefile=\jobname.out\relax
14398 \fi
14399 \fi
14400 }

14401 </vtex>
14402 <*\vtex>
14403 \def\ReadBookmarks{%
14404 \pdf@ifdraftmode{\}%
14405 \begingroup
14406 \def\do##1{%
14407 \ifnum\catcode`###1=\active
14408 \@makeother###1%
14409 \else
14410 \ifnum\catcode`###1=6 %
14411 \@makeother###1%
14412 \fi
14413 \fi
14414 }%
14415 \dospecials
14416 \Hy@safe@activetrue
14417 \escapechar=`\%
14418 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14419 \calc@bm@number{##5}%
14420 }%
14421 \InputIfFileExists{\jobname.out}{\{}}%
14422 \ifx\WriteBookmarks\relax
14423 \global\let\WriteBookmarks\relax
14424 \fi
14425 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14426 \def\Hy@temp{##4}%
14427 <*\pdfTeX>
14428 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14429 \Hy@OutlineName{\}\Hy@pstringName{%
14430 ##2\check@bm@number{##3}%
14431 }{%
14432 \expandafter\strip@prefix\meaning\Hy@temp

```



```

14433     }%
14434 \pdfetex
14435 \*pdfmark
14436     \pdfmark{%
14437         pdfmark=/OUT,%
14438         Count={##2\check@bm@number{##3}},%
14439         Dest={##3},%
14440         Title=\expandafter\strip@prefix\meaning\Hy@temp
14441     }%
14442 \pdfmark
14443 \*dvipdfm|xetex
14444     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14445     \@pdfm@mark{%
14446         outline \ifHy@DvipdfmxOutlineOpen
14447             [%
14448                 \ifnum##21>\z@
14449                 \else
14450                 -%
14451                 \fi
14452             ] %
14453             \fi
14454             ##1<<%
14455             /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14456             /A<<%
14457             /S/GoTo%
14458             /D(\Hy@pstringName)%
14459             >>%
14460             >>%
14461         }%
14462 \dvipdfm|xetex
14463     }%
14464     \begingroup
14465     \def\WriteBookmarks{0}%
14466     \InputIfFileExists{\jobname.out}{-}{-}%
14467     \endgroup
14468     %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
14469     \endgroup
14470 }%
14471 \ifx\WriteBookmarks\relax
14472 \else
14473     \if@files
14474         \newwrite\@outlinefile
14475         \Hy@OutlineRerunCheck
14476         \immediate\openout\@outlinefile=\jobname.out\relax
14477     \fi
14478 \fi
14479 }
14480 \*pdfetex
14481 \def\Hy@OutlineName#1#2#3#4{%
14482     \pdfoutline goto name{#2}count#3{#4}%
14483 }
14484 \pdfetex
14485 \def\check@bm@number#1{%
14486     \expandafter\ifx\csname B_#1\endcsname\relax

```

```

14487 0%
14488 \else
14489 \csname B_#1\endcsname
14490 \fi
14491 }
14492 \def\calc@bm@number#1{%
14493 \@tempcnta=\check@bm@number{#1}\relax
14494 \advance\@tempcnta by 1 %
14495 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14496 }
14497 \</!vtx>

14498 \ifHy@implicit
14499 \else
14500 \expandafter\endinput
14501 \fi

14502 \</outlines>
14503 (*outlines | hypertex>

14504 \newlength\Hy@SectionHShift
14505 \def\Hy@SectionAnchorHref#1{%
14506 \ifx\protect\@typeset@protect
14507 \Hy@@SectionAnchor{#1}%
14508 \fi
14509 }
14510 \DeclareRobustCommand*\Hy@@SectionAnchor[1]{%
14511 \leavevmode
14512 \hbox to 0pt{%
14513 \kern-\Hy@SectionHShift
14514 \Hy@raisedlink{%
14515 \hyper@anchorstart{#1}\hyper@anchorend
14516 }%
14517 \hss
14518 }%
14519 }
14520 \AddToNoCaseChangeList{\Hy@@SectionAnchor}
14521 \@ifundefined{hyper@nopath@sectioning}
14522 {
14523 \let\H@old@ssect\@ssect
14524 \def\@ssect#1#2#3#4#5{%
14525 \Hy@MakeCurrentHrefAuto{section*}%
14526 \setlength{\Hy@SectionHShift}{#1}%
14527 \begingroup
14528 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14529 \toks\tw@\expandafter{%
14530 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14531 #5%
14532 }%
14533 \edef\x{\endgroup
14534 \the\toks@\the\toks\tw@}%
14535 }\x
14536 }
14537 \let\H@old@schapter\@schapter
14538 \def\@schapter#1{%
14539 \begingroup

```

```

14540 \let\@mkboth\@gobbletwo
14541 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14542 \Hy@raisedlink{%
14543   \hyper@anchorstart{\@currentHref}\hyper@anchorend
14544 }%
14545 \endgroup
14546 \H@old@chapter{#1}%
14547 }

```

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:

```

14548 \ltx@ifundefined{@chapter}{}{%
14549   \let\Hy@org@chapter\@chapter
14550   \def\@chapter{%
14551     \def\Hy@next{%
14552       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14553       \Hy@raisedlink{%
14554         \hyper@anchorstart{\@currentHref}\hyper@anchorend
14555       }%
14556     }%
14557     \ifnum\c@secnumdepth>\m@ne
14558       \ltx@ifundefined{if@mainmatter}%
14559       \iftrue{\csname if@mainmatter\endcsname}%
14560       \let\Hy@next\relax
14561     \fi
14562   \fi
14563   \Hy@next
14564   \Hy@org@chapter
14565 }%
14566 }

14567 \let\H@old@part\@part
14568 \@ifundefined{chapter}
14569 { \let\Hy@secnum@part\z@}
14570 { \let\Hy@secnum@part\m@ne}
14571 \def\@part{%
14572   \ifnum\Hy@secnum@part>\c@secnumdepth
14573     \phantomsection
14574   \fi
14575   \H@old@part
14576 }

14577 \let\H@old@spart\@spart
14578 \def\@spart#1{%
14579   \Hy@MakeCurrentHrefAuto{part*}%
14580   \Hy@raisedlink{%
14581     \hyper@anchorstart{\@currentHref}\hyper@anchorend
14582   }%
14583   \H@old@spart{#1}%
14584 }

14585 \let\H@old@sect\@sect
14586 \def\@sect#1#2#3#4#5#6[#7]#8{%
14587   \ifnum #2>\c@secnumdepth
14588     \expandafter\@firstoftwo

```

```

14589 \else
14590 \expandafter\@secondoftwo
14591 \fi
14592 {%
14593 \Hy@MakeCurrentHrefAuto{section*}%
14594 \setlength{\Hy@SectionHShift}{#3}%
14595 \begingroup
14596 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
14597 \toks\tw@\expandafter{%
14598 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14599 #8%
14600 }%
14601 \edef\x{\endgroup
14602 \the\toks@{\the\toks\tw@}%
14603 }\x
14604 }{%
14605 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
14606 }%
14607 }
14608 }{}
14609 </outlines | hypertex>
14610 <*outlines>
14611 \expandafter\def\csname Parent-4\endcsname{}
14612 \expandafter\def\csname Parent-3\endcsname{}
14613 \expandafter\def\csname Parent-2\endcsname{}
14614 \expandafter\def\csname Parent-1\endcsname{}
14615 \expandafter\def\csname Parent0\endcsname{}
14616 \expandafter\def\csname Parent1\endcsname{}
14617 \expandafter\def\csname Parent2\endcsname{}
14618 \expandafter\def\csname Parent3\endcsname{}
14619 \expandafter\def\csname Parent4\endcsname{}
14620 </outlines>

```

46 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

46.1 PD1 encoding

```

14621 <*pd1enc>
14622 \DeclareFontEncoding{PD1}{}{}

Accents
14623 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14624 \DeclareTextAccent{\'}{PD1}{\textacute}
14625 \DeclareTextAccent{\^}{PD1}{\textasciicircum}
14626 \DeclareTextAccent{\~}{PD1}{\texttilde}
14627 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
14628 \DeclareTextAccent{\r}{PD1}{\textring}
14629 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14630 \DeclareTextAccent{\.}{PD1}{\textdotaccent}

```

```

14631 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14632 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
14633 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14634 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14635 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14636 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
14637 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
14638 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14639 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
14640 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textstring}
14641 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14642 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14643 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14644 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
14645 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14646 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14647 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
14648 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
14649 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
14650 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14651 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
14652 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textstring}
14653 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14654 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14655 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14656 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
14657 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14658 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14659 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14660 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14661 \DeclareTextCommand{\newtie}{PD1}[1]{%
14662 \TextSymbolUnavailable{\newtie{#1}}#1%
14663 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

14664 % U+0009 (CHARACTER TABULATION)
14665 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
14666 % U+000A (LINE FEED)
14667 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
14668 % U+000D (CARRIAGE RETURN)
14669 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

14670 % U+02D8 BREVE; breve
14671 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
14672 % U+02C7 CARON; caron
14673 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
14674 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
14675 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
14676 % U+02D9 DOT ABOVE; dotaccent
14677 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
14678 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
14679 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
14680 % U+02DB OGONEK; ogonek

```

14681 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
14682 % U+02DA RING ABOVE; ring
14683 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
14684 % U+02DC SMALL TILDE; ilde, *tilde
14685 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
\040: U+0020 SPACE; *space, spacehackarabic
\041: U+0021 EXCLAMATION MARK; exclam
14686 % U+0022 QUOTATION MARK; quotedbl
14687 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
14688 % U+0023 NUMBER SIGN; numbersign
14689 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
14690 % U+0024 DOLLAR SIGN; dollar
14691 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
14692 % U+0025 PERCENT SIGN; percent
14693 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
14694 % U+0026 AMPERSAND; ampersand
14695 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
\047: U+0027 APOSTROPHE; quotesingle

14696 % U+0028 LEFT PARENTHESIS; parenleft
14697 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
14698 % U+0029 RIGHT PARENTHESIS; parenright
14699 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
14700 % U+002E FULL STOP; period
14701 \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
14702 % U+003C LESS-THAN SIGN; less
14703 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
\075: U+003D EQUALS SIGN; equal
14704 % U+003E GREATER-THAN SIGN; greater
14705 \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
14706 % U+005C REVERSE SOLIDUS; backslash
14707 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
14708 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
14709 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}

\135: U+005D RIGHT SQUARE BRACKET; bracketright
 14710 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14711 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 14712 % U+005F LOW LINE; underscore
 14713 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 14714 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 14715 % U+0060 GRAVE ACCENT; grave
 14716 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 14717 % U+0069 LATIN SMALL LETTER I; i
 14718 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 14719 % U+007B LEFT CURLY BRACKET; braceleft
 14720 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 14721 % U+007C VERTICAL LINE; *bar, verticalbar
 14722 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 14723 % U+007D RIGHT CURLY BRACKET; braceright
 14724 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 14725 % U+007E TILDE; asciitilde
 14726 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 14727 % U+2022 BULLET; bullet
 14728 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 14729 % U+2020 DAGGER; dagger
 14730 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 14731 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 14732 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 14733 \DeclareTextCommand{\textddagger}{PD1}{\textdagger}
 14734 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 14735 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 14736 % U+2014 EM DASH; emdash
 14737 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 14738 % U+2013 EN DASH; endash
 14739 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 14740 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14741 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 14742 % U+2044 FRACTION SLASH; fraction
 14743 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 14744 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 left
 14745 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 14746 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 singlright
 14747 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 14748 % U+2212 MINUS SIGN; minus
 14749 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 14750 % U+2030 PER MILLE SIGN; perthousand
 14751 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 14752 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase

14753 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
14754 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
14755 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
14756 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
14757 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
14758 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
14759 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
14760 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
14761 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
14762 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
14763 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
14764 % U+2122 TRADE MARK SIGN; trademark
14765 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
14766 % U+FB01 LATIN SMALL LIGATURE FI; fi
14767 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
14768 % U+FB02 LATIN SMALL LIGATURE FL; fl
14769 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
14770 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14771 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
14772 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14773 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
14774 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14775 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
14776 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14777 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
14778 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
14779 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
14780 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
14781 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14782 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
14783 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14784 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
14785 % U+0153 LATIN SMALL LIGATURE OE; oe
14786 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
14787 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14788 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
14789 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
14790 \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.

14791 % U+20AC EURO SIGN; *Euro, euro
14792 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
14793 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
14794 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
14795 % U+00A2 CENT SIGN; cent
14796 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
14797 % U+00A3 POUND SIGN; sterling
14798 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
14799 % U+00A4 CURRENCY SIGN; currency
14800 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
14801 % U+00A5 YEN SIGN; yen
14802 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
14803 % U+00A6 BROKEN BAR; brokenbar
14804 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6

14805 % U+00A7 SECTION SIGN; section
 14806 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 14807 % U+00A8 DIAERESIS; dieresis
 14808 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 14809 % U+00A9 COPYRIGHT SIGN; copyright
 14810 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 14811 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 14812 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 14813 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
 14814 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 14815 \DeclareTextCommand{\guillemetleft}{PD1}{\253}% U+00AB
 14816 % U+00AC NOT SIGN; logicalnot
 14817 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 14818 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 14819 % U+00AE REGISTERED SIGN; registered
 14820 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 14821 % U+00AF MACRON; *macron, overscore
 14822 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 14823 % U+00B0 DEGREE SIGN; degree
 14824 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 14825 % U+00B1 PLUS-MINUS SIGN; plusminus
 14826 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 14827 % U+00B2 SUPERSCRIPT TWO; twosuperior
 14828 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
 14829 % U+00B3 SUPERSCRIPT THREE; threesuperior
 14830 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
 14831 % U+00B4 ACUTE ACCENT; acute
 14832 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 14833 % U+00B5 MICRO SIGN; mu, mul
 14834 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 14835 % U+00B6 PILCROW SIGN; paragraph
 14836 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 14837 % U+00B7 MIDDLE DOT; middot, *periodcentered
 14838 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 14839 % U+00B8 CEDILLA; cedilla
 14840 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 14841 % U+00B9 SUPERSCRIPT ONE; onesuperior
 14842 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
 14843 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 14844 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 14845 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
 14846 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 14847 \DeclareTextCommand{\guillemetright}{PD1}{\273}% U+00BB
 14848 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 14849 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 14850 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 14851 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 14852 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 14853 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 14854 % U+00BF INVERTED QUESTION MARK; questiondown
 14855 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 14856 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 14857 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0

14858 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14859 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
14860 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14861 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
14862 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14863 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
14864 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14865 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
14866 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14867 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
14868 % U+00C6 LATIN CAPITAL LETTER AE; AE
14869 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
14870 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14871 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
14872 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14873 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
14874 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14875 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
14876 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14877 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
14878 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14879 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
14880 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14881 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
14882 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14883 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
14884 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14885 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
14886 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14887 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
14888 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14889 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
14890 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14891 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14892 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14893 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14894 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14895 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14896 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14897 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14898 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14899 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14900 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14901 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14902 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
14903 % U+00D7 MULTIPLICATION SIGN; multiply
14904 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14905 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14906 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14907 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14908 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14909 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14910 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14911 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex

14912 \DeclareTextCompositeCommand{\~}{PD1}{U}{\333}% U+00DB
14913 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14914 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
14915 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14916 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
14917 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
14918 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
14919 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
14920 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14921 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
14922 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14923 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
14924 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14925 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
14926 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14927 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
14928 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14929 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
14930 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14931 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
14932 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14933 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
14934 % U+00E6 LATIN SMALL LETTER AE; ae
14935 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
14936 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14937 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
14938 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14939 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
14940 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14941 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
14942 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14943 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
14944 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14945 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
14946 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14947 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
14948 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
14949 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14950 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
14951 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
14952 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14953 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
14954 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
14955 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14956 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
14957 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
14958 % U+00F0 LATIN SMALL LETTER ETH; eth
14959 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
14960 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14961 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
14962 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14963 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
14964 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14965 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3

14966 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 14967 \DeclareTextCompositeCommand{\~}{PD1}{o}{\364}% U+00F4
 14968 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 14969 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
 14970 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 14971 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
 14972 % U+00F7 DIVISION SIGN; divide
 14973 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 14974 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 14975 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 14976 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 14977 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
 14978 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 14979 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
 14980 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 14981 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
 14982 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 14983 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
 14984 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 14985 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
 14986 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
 14987 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 14988 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
 14989 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 14990 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
 14991 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.

14992 \DeclareTextCommand{\SS}{PD1}{SS}%
 14993 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)

14994 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
 14995 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
 14996 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
 14997 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
 14998 \DeclareTextCommand{\textflqq}{PD1}{\guillemetleft}%
 14999 \DeclareTextCommand{\textfrqq}{PD1}{\guillemetright}%
 15000 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
 15001 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

Aliases (math names)

15002 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
 15003 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
 15004 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
 15005 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
 15006 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
 15007 \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).

15008 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
 15009 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
 15010 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
 15011 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
 15012 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute

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15013 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15014 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15015 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15016 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15017 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15018 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15019 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15020 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15021 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15022 </pd1enc>

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46.2 PU encoding

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15023 <*puenc>
15024 \DeclareFontEncoding{PU}{-}{-}

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46.2.1 NFSS2 accents

```

15025 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecmb
15026 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15027 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecmb
15028 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15029 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15030 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15031 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15032 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15033 % U+0304 COMBINING MACRON; macroncmb
15034 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15035 % U+0306 COMBINING BREVE; brevecmb
15036 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15037 \ifx\CYRDZE\@undefined \else
15038 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15039 \fi
15040 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15041 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15042 % U+0308 COMBINING DIAERESIS; dieresiscmb
15043 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15044 % U+030A COMBINING RING ABOVE; ringcmb
15045 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15046 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15047 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15048 % U+030C COMBINING CARON; caroncmb
15049 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15050 </puenc>
15051 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15052 <puextra>\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15053 <*puenc>
15054 \ifx\CYRDZE\@undefined \else
15055 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15056 \fi
15057 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15058 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15059 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15060 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
15061 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323

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15062 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubumlaut (tipa)
15063 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15064 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15065 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15066 % U+0327 COMBINING CEDILLA; cedillacmb
15067 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15068 % U+0328 COMBINING OGONEK; ogonekcmb
15069 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15070 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15071 % \textsubcircum (tipa)
15072 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15073 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15074 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15075 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15076 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15077 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15078 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15079 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
15080 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15081 % U+20DD COMBINING ENCLOSING CIRCLE
15082 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

15083 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15084 \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.

15085 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15086 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15087 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}%
15088 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15089 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15090 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
15091 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15092 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15093 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15094 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15095 (/puenc)
15096 (puextra)\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15097 (*puenc)
15098 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15099 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15100 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15101 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\83\021}% U+0311
15102 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\83\044}% U+0324
15103 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
15104 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircumlow}%
15105 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\83\056}% U+032E
15106 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%
15107 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15108 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%

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15109 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15110 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15111 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15112 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
15113 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
15114 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
15115 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15116 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%
15117 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15118 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15119 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15120 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15121 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15122 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15123 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15124 (/puenc)
15125 ⟨puextra⟩\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
15126 (*puenc)
15127 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
15128 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
15129 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
15130 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
15131 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
15132 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
15133 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
15134 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
15135 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildebelow}%
15136 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
15137 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
15138 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
15139 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
15140 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
15141 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
15142 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

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Accents for capitals (see encoding TS1)

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15143 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
15144 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
15145 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
15146 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
15147 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
15148 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
15149 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
15150 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
15151 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
15152 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
15153 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
15154 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
15155 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
15156 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
15157 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

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46.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

15158 % U+0009 (CHARACTER TABULATION)
 15159 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
 15160 % U+000A (LINE FEED)
 15161 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
 15162 % U+000D (CARRIAGE RETURN)
 15163 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
 \80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 15164 % U+0022 QUOTATION MARK; quotedbl
 15165 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
 15166 % U+0023 NUMBER SIGN; numbersign
 15167 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 15168 % U+0024 DOLLAR SIGN; dollar
 15169 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 15170 %* \textdollar -> \mathdollar
 15171 %* \textdollar -> \EyesDollar (marvosym)
 15172 % U+0025 PERCENT SIGN; percent
 15173 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 15174 % U+0026 AMPERSAND; ampersand
 15175 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 15176 %* \textampersand -> \binampersand (stmaryrd)
 15177 %* \textampersand -> \with (cml)
 15178 % U+0027 APOSTROPHE; quotesingle
 15179 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 15180 % U+0028 LEFT PARENTHESIS; parenleft
 15181 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 15182 % U+0029 RIGHT PARENTHESIS; parenright
 15183 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 15184 % U+002A ASTERISK; asterisk; (?)
 15185 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
 15186 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
 15187 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
 15188 % U+002C COMMA; comma; \MVComma (marvosym)
 15189 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
 15190 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
 15191 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
 15192 % U+002E FULL STOP; period; \MVPeriod (marvosym)
 15193 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
 15194 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
 15195 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
 15196 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
 15197 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
 15198 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
 15199 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 15200 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
 15201 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 15202 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 15203 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 15204 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
 15205 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
 15206 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
 15207 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
 15208 % U+0036 DIGIT SIX; six; \MVSix (marvosym)

15209 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 15210 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 15211 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 15212 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 15213 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 15214 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 15215 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 15216 % U+003C LESS-THAN SIGN; less
 15217 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 15218 % U+003E GREATER-THAN SIGN; greater
 15219 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 15220 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
 15221 \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
 15222 % U+005C REVERSE SOLIDUS; backslash
 15223 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 15224 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15225 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 15226 % U+005F LOW LINE; underscore
 15227 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 15228 %* \textunderscore -> \mathunderscore (LaTeX)
 15229 % U+0060 GRAVE ACCENT; grave
 15230 \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
 15231 % U+0069 LATIN SMALL LETTER I; i
 15232 \DeclareTextCompositeCommand{\.}{PU}{\i}{i}% \80\151 U+0069
 15233 \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
 15234 % U+007B LEFT CURLY BRACKET; braceleft
 15235 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 15236 % U+007C VERTICAL LINE; *bar, verticalbar
 15237 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 15238 %* \textbar -> \textvertline (tipa)
 15239 % U+007D RIGHT CURLY BRACKET; braceright
 15240 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 15241 % U+007E TILDE; asciitilde
 15242 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

46.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
15243 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15244 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
15245 % U+00A2 CENT SIGN; cent
15246 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
15247 % U+00A3 POUND SIGN; sterling
15248 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
15249 %* \textsterling -> \mathsterling (LaTeX)
15250 %* \textsterling -> \pounds (LaTeX)
15251 % U+00A4 CURRENCY SIGN; currency
15252 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
15253 % U+00A5 YEN SIGN; yen
15254 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
15255 % U+00A6 BROKEN BAR; brokenbar
15256 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
15257 %* \textbrokenbar -> \brokenvert (wasysym)
15258 % U+00A7 SECTION SIGN; section
15259 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
15260 %* \textsection -> \mathsection (LaTeX)
15261 %* \textsection -> \S (LaTeX)
15262 % U+00A8 DIAERESIS; dieresis
15263 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
15264 % U+00A9 COPYRIGHT SIGN; copyright
15265 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
15266 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15267 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
15268 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
15269 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
15270 \DeclareTextCommand{\guillemetleft}{PU}{\80\253}% U+00AB
15271 % U+00AC NOT SIGN; logicalnot
15272 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
15273 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
15274 % U+00AE REGISTERED SIGN; registered
15275 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
15276 % U+00AF MACRON; *macron, overscore
15277 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
15278 % U+00B0 DEGREE SIGN; degree
15279 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
15280 % U+00B1 PLUS-MINUS SIGN; plusminus
15281 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
15282 % U+00B2 SUPERScript TWO; twosuperior
15283 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15284 % U+00B3 SUPERScript THREE; threesuperior
15285 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15286 % U+00B4 ACUTE ACCENT; acute
15287 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15288 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
15289 % U+00B5 MICRO SIGN; mu, mu1
15290 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15291 % U+00B6 PILCROW SIGN; paragraph
15292 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6

15293 %* \textparagraph -> \mathparagraph (LaTeX)
15294 % U+00B7 MIDDLE DOT; middot, *periodcentered
15295 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
15296 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15297 %* \textperiodcentered -> \Squaredot (marvosym)
15298 % U+00B8 CEDILLA; cedilla
15299 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15300 % U+00B9 SUPERSCRIPT ONE; onesuperior
15301 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15302 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15303 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15304 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
15305 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15306 \DeclareTextCommand{\guillemetright}{PU}{\80\273}% U+00BB
15307 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15308 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15309 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15310 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15311 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15312 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15313 % U+00BF INVERTED QUESTION MARK; questiondown
15314 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15315 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15316 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15317 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15318 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15319 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15320 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15321 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15322 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15323 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15324 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15325 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15326 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15327 % U+00C6 LATIN CAPITAL LETTER AE; AE
15328 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15329 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15330 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15331 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15332 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15333 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15334 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15335 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15336 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15337 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15338 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15339 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15340 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15341 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15342 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15343 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15344 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15345 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15346 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF

15347 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15348 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15349 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15350 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15351 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15352 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
15353 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15354 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15355 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15356 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15357 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15358 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15359 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15360 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
15361 % U+00D7 MULTIPLICATION SIGN; multiply
15362 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15363 %* \textmultiply -> \vartimes (stmaryrd)
15364 %* \textmultiply -> \MVMultiplication (marvosym)
15365 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15366 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15367 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15368 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
15369 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15370 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15371 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15372 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15373 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15374 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15375 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15376 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15377 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15378 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15379 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15380 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15381 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15382 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15383 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
15384 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15385 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15386 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15387 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15388 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15389 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15390 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15391 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15392 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15393 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15394 % U+00E6 LATIN SMALL LETTER AE; ae
15395 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15396 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15397 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15398 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15399 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15400 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute

15401 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15402 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15403 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15404 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15405 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15406 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15407 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15408 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\354}% U+00EC
15409 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15410 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15411 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\355}% U+00ED
15412 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15413 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15414 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15415 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15416 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15417 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15418 % U+00F0 LATIN SMALL LETTER ETH; eth
15419 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
15420 %* \dh -> \eth (wsuipa, phonetic)
15421 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15422 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
15423 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15424 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
15425 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15426 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
15427 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15428 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
15429 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15430 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
15431 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15432 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
15433 % U+00F7 DIVISION SIGN; divide
15434 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
15435 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15436 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
15437 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15438 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
15439 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15440 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
15441 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15442 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
15443 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15444 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
15445 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15446 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
15447 % U+00FE LATIN SMALL LETTER THORN; thorn;
15448 % \th, \thorn (wasysym), \textthorn (tipa)
15449 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
15450 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
15451 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15452 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

46.2.4 Latin Extended-A: U+0080 to U+017F

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15453 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
15454 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
15455 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
15456 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
15457 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
15458 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
15459 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
15460 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
15461 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
15462 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
15463 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
15464 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
15465 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
15466 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
15467 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
15468 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
15469 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
15470 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
15471 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
15472 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
15473 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
15474 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15475 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15476 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15477 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15478 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15479 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15480 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15481 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15482 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15483 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15484 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
15485 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15486 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
15487 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
15488 % \textcrd (tipa)
15489 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
15490 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
15491 %* \textcrd -> \crossd (wsuipa)
15492 % An alternate glyph with the stroke through the bowl:
15493 %* \textcrd -> \textbard (tipa)
15494 %* \textcrd -> \bard (wsuipa)
15495 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15496 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
15497 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15498 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
15499 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15500 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15501 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15502 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15503 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent

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15504 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15505 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15506 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15507 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15508 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15509 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15510 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15511 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15512 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15513 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15514 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15515 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15516 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15517 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15518 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15519 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15520 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15521 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
15522 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15523 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
15524 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
15525 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15526 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
15527 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
15528 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15529 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15530 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15531 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15532 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15533 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15534 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15535 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15536 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
15537 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
15538 \DeclareTextCommand{\textthbar}{PU}{\81\047}%* U+0127
15539 %* \textthbar -> \textcrh (tipa)
15540 %* \textthbar -> \crossh (wsuipa)
15541 %* \textthbar -> \planck (phonetic)
15542 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15543 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15544 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15545 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15546 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15547 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15548 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
15549 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15550 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15551 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15552 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15553 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
15554 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15555 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D

```

15556 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15557 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
15558 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
15559 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
15560 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15561 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15562 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
15563 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
15564 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15565 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
15566 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
15567 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
15568 % U+0133 LATIN SMALL LIGATURE IJ; ij
15569 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
15570 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
15571 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
15572 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
15573 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15574 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15575 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
15576 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
15577 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
15578 \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`.

```

15579 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
15580 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
15581 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
15582 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
15583 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
15584 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
15585 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
15586 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
15587 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
15588 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
15589 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
15590 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
15591 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
15592 \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`.

```

15593 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent
15594 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
15595 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
15596 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
15597 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15598 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
15599 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash

```


15600 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
15601 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
15602 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
15603 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
15604 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
15605 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
15606 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
15607 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
15608 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
15609 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
15610 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
15611 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
15612 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
15613 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
15614 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
15615 % U+014A LATIN CAPITAL LETTER ENG; Eng
15616 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15617 % U+014B LATIN SMALL LETTER ENG; eng
15618 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15619 %* \ng -> \eng (wsuipa)
15620 %* \ng -> \engma (phonetic)
15621 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15622 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
15623 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15624 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
15625 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15626 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
15627 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15628 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
15629 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
15630 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
15631 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
15632 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
15633 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15634 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
15635 % U+0153 LATIN SMALL LIGATURE OE; oe
15636 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
15637 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
15638 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
15639 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
15640 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
15641 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
15642 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
15643 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
15644 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
15645 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
15646 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
15647 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
15648 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159

15649 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 15650 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 15651 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 15652 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 15653 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 15654 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 15655 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 15656 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 15657 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 15658 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 15659 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 15660 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 15661 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15662 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 15663 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15664 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 15665 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
 cent
 15666 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 15667 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 15668 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 15669 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 15670 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 15671 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 15672 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 15673 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 15674 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 15675 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 15676 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 15677 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 15678 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 15679 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 15680 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 15681 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 15682 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 15683 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 15684 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 15685 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 15686 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 15687 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 15688 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 15689 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 15690 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 15691 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 15692 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 15693 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
 cute, Uhungarumlaut
 15694 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 15695 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
 cute, uhungarumlaut
 15696 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 15697 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 15698 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 15699 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek

15700 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 15701 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 15702 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 15703 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 15704 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 15705 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 15706 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 15707 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 15708 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 15709 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15710 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 15711 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 15712 \DeclareTextCompositeCommand{'}{PU}{Z}{\81\171}% U+0179
 15713 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 15714 \DeclareTextCompositeCommand{'}{PU}{z}{\81\172}% U+017A
 15715 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 15716 \DeclareTextCompositeCommand{.}{PU}{Z}{\81\173}% U+017B
 15717 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 15718 \DeclareTextCompositeCommand{.}{PU}{z}{\81\174}% U+017C
 15719 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15720 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 15721 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15722 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 15723 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 15724 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

46.2.5 Latin Extended-B: U+0180 to U+024F

15725 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 15726 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 15727 %* \textcrb -> \crossb (wsuipa)
 15728 % An alternate glyph with the stroke through the bowl:
 15729 %* \textcrb -> \textbarb (tipa)
 15730 %* \textcrb -> \barb (wsuipa)
 15731 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausaB (pho-
 netic)
 15732 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
 15733 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 15734 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 15735 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausaD (pho-
 netic)
 15736 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A
 15737 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed
 15738 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E
 15739 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
 15740 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15741 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 15742 %* \textflorin -> \Florin (marvosym)
 15743 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
 15744 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
 15745 %* \texthvlig -> \hv (wsuipa)
 15746 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausaK (pho-
 netic)
 15747 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198
 15748 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)

15749 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
15750 %* \texthtk -> \hausak (phonetic)
15751 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
15752 % \textbarl (tipa), \barl (wsuipa)
15753 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
15754 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
15755 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
15756 % \textcrlambda (tipa)
15757 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
15758 %* \textcrlambda -> \crossnilambda (wsuipa)
15759 %* \textcrlambda -> \barlambdabar (phonetic)
15760 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
15761 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
15762 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
long;
15763 % \textnrleg (tipx)
15764 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
15765 %* \textPUnrleg -> \textnrleg (tipx)
15766 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
15767 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
15768 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
15769 % \textlhookt (tipa)
15770 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
15771 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
15772 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
15773 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
15774 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
15775 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
15776 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
15777 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
15778 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
15779 % glottalinvertedstroke; \textcrinvglotstop (tipa)
15780 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
15781 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
15782 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
15783 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
15784 % \textpipe (tipa)
15785 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
15786 %* \textpipe -> \textpipevar (tipx)
15787 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
15788 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
15789 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
15790 %* \textdoublepipe -> \textdoublepipevar (tipx)
15791 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
15792 % clickalveolar; \textdoublebarpipe (tipa)
15793 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
15794 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
15795 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
15796 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
15797 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
15798 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
15799 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron

15800 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
15801 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
15802 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15803 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15804 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
15805 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
15806 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
15807 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
15808 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
15809 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
15810 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
15811 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
15812 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
15813 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
15814 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
15815 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
15816 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
15817 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
15818 %* \textgslash -> \textcrg (tipa)
15819 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
15820 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
15821 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
15822 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
15823 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
15824 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
15825 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
15826 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
15827 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
15828 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
15829 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
15830 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
15831 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
15832 \DeclareTextCompositeCommand{\v}{PU}{\j}{\81\360}% U+01F0
15833 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
15834 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
15835 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
15836 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
15837 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
15838 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
15839 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
15840 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
15841 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
15842 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
15843 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
15844 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
15845 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
15846 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
15847 % *Oslashacute, Ostrokeacut
15848 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
15849 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
15850 % *oslashacute, ostrokeacute
15851 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
15852 (/puenc)
15853 (*puextra)

15854 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
15855 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
15856 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
15857 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
15858 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
15859 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
15860 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
15861 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
15862 \puextra
15863 \puenc
15864 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
15865 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
15866 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
15867 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
15868 \puenc
15869 \puextra
15870 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
15871 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
15872 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
15873 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15874 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15875 \puextra
15876 \puenc
15877 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinvert-
breve
15878 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
15879 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinvert-
breve
15880 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15881 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15882 \puenc
15883 \puextra
15884 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
15885 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
15886 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
15887 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
15888 \puextra
15889 \puenc
15890 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
15891 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
15892 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinvert-
breve
15893 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
15894 \puenc
15895 \puextra
15896 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
15897 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
15898 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
15899 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
15900 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
15901 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214

15902 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 15903 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 15904 </puextra>
 15905 <*puenc>
 15906 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
 edbreve
 15907 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
 15908 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
 breve
 15909 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 15910 % U+021E LATIN CAPITAL LETTER H WITH CARON
 15911 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 15912 % U+021F LATIN SMALL LETTER H WITH CARON
 15913 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 15914 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 15915 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 15916 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 15917 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 15918 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 15919 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 15920 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 15921 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 15922 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 15923 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 15924 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 15925 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 15926 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 15927 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 15928 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 15929 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 15930 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 15931 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 15932 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 15933 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 15934 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 15935 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 15936 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 15937 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 15938 % U+0237 LATIN SMALL LETTER DOTLESS J
 15939 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 15940 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 15941 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 15942 %* \textPUdblig -> \textdblig (tipx)
 15943 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 15944 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 15945 %* \textPUqplig -> \textqplig (tipx)
 15946 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 15947 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 15948 %* \textslashc -> \textcentoldstyle (textcomp)
 15949 % With bar instead of stroke:
 15950 %* \textslashc -> \textbarc (tipa)

46.2.6 IPA Extensions: U+0250 to U+02AF

15951 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)

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15952 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
15953 %* \textturna -> \inva (wasysym)
15954 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
15955 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
15956 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
15957 %* \textscripta -> \vara (phonetic)
15958 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
15959 % \textturnscripta (tipa)
15960 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
15961 %* \textturnscripta -> \invscripta (wsuipa)
15962 %* \textturnscripta -> \rotvara (phonetic)
15963 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
15964 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
15965 %* \texthtb -> \hookb (wsuipa)
15966 %* \texthtb -> \hausab (phonetic)
15967 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
15968 % \textopeno (tipa), \openo (wasysym)
15969 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
15970 %* \textopeno -> \varopeno (phonetic)
15971 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
15972 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
15973 %* \textctc -> \curlyc (wsuipa)
15974 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
15975 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
15976 %* \textrtaild -> \taild (wsuipa)
15977 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
15978 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
15979 %* \texthtd -> \hookd (wsuipa)
15980 %* \texthtd -> \hausad (phonetic)
15981 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
15982 % \textreve (tipa), \reve (wsuipa)
15983 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
15984 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
15985 % \textschwa (tipa), \schwa (wsuipa, phonetic)
15986 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
15987 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
15988 % \textrhookschwa (tipa)
15989 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
15990 %* \textrhookschwa -> \er (wsuipa)
15991 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
    SILON; eopen;
15992 % \niepsilon (wsuipa)
15993 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
15994 %* \textniepsilon -> \epsi (phonetic)
15995 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
15996 % \textrevepsilon (tipa), \revepsilon (wsuipa)
15997 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
15998 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
    reversedhook;
15999 % \textrhookrevepsilon (tipa)
16000 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
16001 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
16002 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
    versedclosed;

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16003 % \textcloserevepsilon (tipa)
 16004 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
 16005 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
 16006 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16007 % \textbardotlessj (tipa)
 16008 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16009 %* \textbardotlessj -> \barj (phonetic)
 16010 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16011 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16012 %* \texthtg -> \hookg (wsuipa)
 16013 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16014 % \textscriptg (tipa), \scriptg (wsuipa)
 16015 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16016 %* \textscriptg -> \varg (phonetic)
 16017 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16018 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
 16019 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
 16020 % \ipagamma (wsuipa), \vod (phonetic)
 16021 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
 16022 %* \textipagamma -> \vod (pnonetic)
 16023 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
 16024 % \babygamma (wsuipa)
 16025 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
 16026 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16027 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16028 %* \textturnh -> \invh (wsuipa)
 16029 %* \textturnh -> \udesc (phonetic)
 16030 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16031 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16032 %* \texthth -> \hookh (wsuipa)
 16033 %* \texthth -> \voicedh (phonetic)
 16034 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
 ththeng (tipa)
 16035 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16036 %* \texththeng -> \hookheng (wsuipa)
 16037 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16038 % \textbari (tipa), \bari (wsuipa)
 16039 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
 16040 %* \textbari -> \ibar (phonetic)
 16041 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
 16042 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
 16043 %* \textniiota -> \vari (phonetic)
 16044 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
 16045 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
 16046 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 16047 % \textltilde (tipa)
 16048 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 16049 %* \textltilde -> \tildel (wsuipa)
 16050 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 16051 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 16052 %* \textbeltl -> \latfric (wsuipa)
 16053 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 16054 % \hookretroflex; \textrtaill (tipa)

16055 \DeclareTextCommand{\texttrtail}{PU}{\82\155}% U+026D
16056 %* \texttrtail -> \tail (wsuipa)
16057 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16058 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16059 %* \textlyoghlig -> \lz (wsuipa)
16060 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16061 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16062 %* \textturnm -> \invm (wsuipa)
16063 %* \textturnm -> \rotm (phonetic)
16064 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16065 % \textturnmrleg (tipa)
16066 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16067 %* \textturnmrleg -> \legm (wsuipa)
16068 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16069 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16070 %* \textltailm -> \labdentalnas (wsuipa)
16071 %* \textltailm -> \emgma (phonetic)
16072 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
16073 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16074 %* \textltailn -> \nj (wsuipa)
16075 %* \textltailn -> \nya (phonetic)
16076 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16077 % nhookretroflex; \textrtailn (tipa)
16078 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16079 %* \textrtailn -> \tailn (wsuipa)
16080 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16081 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16082 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16083 % LATIN CAPITAL LETTER BARRED O; obarred;
16084 % \textbaro (tipa), \baro (wsuipa)
16085 % But \baro from stmaryrd is different!
16086 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16087 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16088 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16089 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatincloded;
16090 % \textcloseomega (tipa)
16091 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16092 %* \textcloseomega -> \closedniomega (wsuipa)
16093 %* \textcloseomega -> \varomega (phonetic)
16094 % U+0278 LATIN SMALL LETTER PHI; philatin; \niphy (wsuipa)
16095 \DeclareTextCommand{\textniphy}{PU}{\82\170}%* U+0278
16096 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16097 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16098 %* \textturnr -> \invr (wsuipa)
16099 %* \textturnr -> \rotr (phonetic)
16100 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16101 % rlonglegturned; \textturnlongleg (tipa)
16102 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
16103 %* \textturnlongleg -> \invleg (wsuipa)
16104 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
16105 % \textturnrrtail (tipa)
16106 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B

16107 %* \textturnrrtail -> \tailinvr (wsuipa)
 16108 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlonglegr (tipa)
 16109 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C
 16110 %* \textlonglegr -> \legr (wsuipa)
 16111 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoor; \textrtailr (tipa)
 16112 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
 16113 %* \textrtailr -> \tailr (wsuipa)
 16114 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
 16115 % \textfishhookr (tipa)
 16116 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
 16117 %* \textfishhookr -> \flapr (wsuipa)
 16118 %* \textfishhookr -> \flap (phonetic)
 16119 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
 16120 % \textlhtlongi (tipa)
 16121 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
 16122 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
 16123 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
 16124 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
 16125 % \textinvscr (tipa), \invscr (wsuipa)
 16126 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
 16127 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
 16128 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
 16129 %* \textrtails -> \tails (wsuipa)
 16130 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
 16131 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
 16132 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
 16133 % dotlessjstrokehook; \texthtbardotlessj (tipa)
 16134 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
 16135 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
 16136 % \textvibyi (tipa)
 16137 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
 16138 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
 16139 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
 16140 %* \textctesh -> \curlyesh (wsuipa)
 16141 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
 16142 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
 16143 %* \textturnt -> \clickt (wsuipa)
 16144 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; tretroflexhook;
 16145 % \textrtailt (tipa)
 16146 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
 16147 %* \textrtailt -> \tailt (wsuipa)
 16148 % U+0289 LATIN SMALL LETTER U BAR; ubar;
 16149 % \textbaru (tipa), \baru (wsuipa)
 16150 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
 16151 %* \textbaru -> \ubar (phonetic)
 16152 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
 16153 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
 16154 %* \textniupsilon -> \rotOmega (phonetic)
 16155 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;

16156 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16157 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16158 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16159 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16160 %* \textturnv -> \invv (wsuipa)
16161 %* \textturnv -> \pwedge (phonetic)
16162 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
16163 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16164 %* \textturnw -> \invw (wsuipa)
16165 %* \textturnw -> \rotw (phonetic)
16166 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16167 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16168 %* \textturny -> \invy (wsuipa)
16169 %* \textturny -> \roty (phonetic)
16170 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16171 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
16172 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
16173 % \textrtailz (tipa)
16174 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
16175 %* \textrtailz -> \tailz (wsuipa)
16176 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
16177 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
16178 %* \textctz -> \curlyz (wsuipa)
16179 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
16180 % \textyogh (tipa), \yogh (wsuipa)
16181 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
16182 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
16183 % ezhcurl; \textctyogh (tipa)
16184 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
16185 %* \textctyogh -> \curlyyogh (wsuipa)
16186 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
16187 % \textglotstop (tipa), \glotstop (wsuipa)
16188 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
16189 %* \textglotstop -> \ejective (wsuipa)
16190 %* \textglotstop -> \glottal (phonetic)
16191 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
16192 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
16193 % \textrevglotstop (tipa), \revglotstop (wsuipa)
16194 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
16195 %* \textrevglotstop -> \reveject (wsuipa)
16196 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
16197 % \textinvglotstop (tipa), \invglotstop (wsuipa)
16198 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
16199 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
16200 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16201 %* \textstretchc -> \clickc (wsuipa)
16202 %* \textstretchc -> \textstretchcvar (tipx)
16203 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16204 % \textbullseye (tipa)
16205 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16206 %* \textbullseye -> \clickb (wsuipa)
16207 %* \textbullseye -> \textObullseye (tipx)

16208 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
 16209 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
 16210 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
 16211 % \textclosepsilon (tipa)
 16212 \DeclareTextCommand{\textclosepsilon}{PU}{\82\232}% U+029A
 16213 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
 16214 % \texthtscg (tipa)
 16215 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
 16216 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
 16217 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
 16218 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossed-
 tail; \textcdj (tipa)
 16219 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
 16220 %* \textctj -> \textctjvar (tipx)
 16221 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
 16222 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
 16223 %* \textturnk -> \textturnsck (tipx)
 16224 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
 16225 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
 16226 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
 16227 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 16228 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
 stroke;
 16229 % \textbarglotstop (tipa)
 16230 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 16231 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 16232 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
 versed;
 16233 % \textbarrevglotstop (tipa)
 16234 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 16235 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 16236 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 16237 %* \textdzlig -> \dz (wsupipa)
 16238 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
 lig (tipa)
 16239 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 16240 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 16241 % \textdctzlig (tipa)
 16242 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 16243 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 16244 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 16245 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
 16246 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
 16247 %* \textteshlig -> \tesh (wsuipa)
 16248 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 16249 % \texttctclig (tipa)
 16250 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 16251 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 16252 % \textlhtlongy (tipa)
 16253 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 16254 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 16255 % \textvibyy (tipa)
 16256 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

46.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

16257 % U+02BD MODIFIER LETTER REVERSED COMMA;
16258 % commareversedmod, afi64937; \textrevapostrophe (tipa)
16259 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
16260 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
16261 % \textrai seglotstop (tipa)
16262 \DeclareTextCommand{\textrai seglotstop}{PU}{\82\300}% U+02C0
16263 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
16264 % \textlptr (tipa)
16265 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
16266 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
16267 % \textrptr (tipa)
16268 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
16269 % U+02C7 CARON; caron
16270 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
16271 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
16272 % \textprimstress (tipa)
16273 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
16274 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
16275 % \textsecstress (tipa)
16276 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
16277 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
16278 % \textlengthmark (tipa)
16279 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
16280 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
16281 % \texthalf length (tipa)
16282 \DeclareTextCommand{\texthalf length}{PU}{\82\321}% U+02D1
16283 % U+02D8 BREVE; breve
16284 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
16285 % U+02D9 DOT ABOVE; dotaccent
16286 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
16287 % U+02DA RING ABOVE; ring
16288 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
16289 % U+02DB OGONEK; ogonek
16290 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
16291 % U+02DC SMALL TILDE; ilde, *tilde
16292 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
16293 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
16294 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
16295 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
16296 % U+02F3 MODIFIER LETTER LOW RING
16297 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
16298 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
16299 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
16300 % U+02F7 MODIFIER LETTER LOW TILDE
16301 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
16302 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopen corner (tipa)
16303 \DeclareTextCommand{\textopen corner}{PU}{\82\371}% U+02F9
16304 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
16305 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

46.2.8 Combining Diacritical Marks: U+0300 to U+036F

```

16306 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
16307 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
16308 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16309 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
16310 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
16311 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
16312 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16313 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
16314 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
      blecmb
16315 \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.

```

16316 \ifx\textBeta\@undefined \else
16317 \input{puenc-greek.def}
16318 \fi
16319 </puenc>

```

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.

```

16320 <*puenc>
16321 \ifx\CYRDZE\@undefined \else
16322 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
16323 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
16324 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
16325 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
16326 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
16327 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
16328 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
16329 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
16330 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
16331 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
16332 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
16333 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
16334 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
16335 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
16336 % Icyrrilic, *afii10055
16337 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
16338 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
16339 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
16340 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
16341 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
16342 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
16343 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
16344 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
16345 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
16346 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
16347 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
16348 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
16349 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061

```

16350 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
16351 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
16352 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
16353 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
16354 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
16355 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
16356 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
16357 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
16358 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
16359 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
16360 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
16361 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
16362 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
16363 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
16364 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
16365 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
16366 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
16367 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
16368 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
16369 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
16370 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
16371 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
16372 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
16373 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
16374 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
16375 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
16376 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; lishortcyrillic, *afii10027
16377 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
16378 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
16379 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
16380 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
16381 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
16382 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
16383 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
16384 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
16385 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
16386 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
16387 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
16388 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
16389 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
16390 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
16391 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
16392 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
16393 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
16394 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
16395 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
16396 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
16397 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
16398 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
16399 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
16400 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
16401 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
16402 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
16403 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040

16404 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
16405 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
16406 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
16407 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
16408 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
16409 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
16410 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
16411 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
16412 % Hardsigncyrillic, *afii10044
16413 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
16414 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
16415 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
16416 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
16417 % Softsigncyrillic, *afii10046
16418 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
16419 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
16420 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
16421 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
16422 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
16423 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
16424 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
16425 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
16426 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
16427 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
16428 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
16429 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
16430 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
16431 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
16432 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
16433 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
16434 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
16435 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
16436 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
16437 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
16438 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
16439 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
16440 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
16441 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
16442 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
16443 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
16444 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
16445 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
16446 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
16447 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
16448 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
16449 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
16450 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
16451 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
16452 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
16453 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
16454 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
16455 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
16456 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
16457 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F

16458 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
 16459 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
 16460 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
 16461 \DeclareTextCommand{\cyr s}{PU}{\84\101}% U+0441
 16462 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
 16463 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
 16464 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
 16465 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
 16466 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
 16467 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
 16468 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
 16469 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
 16470 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
 16471 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
 16472 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
 16473 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
 16474 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
 16475 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
 16476 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
 16477 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
 16478 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
 16479 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
 16480 %* \cyrhrdsn -> \hardsign (tipa)
 16481 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
 16482 \DeclareTextCommand{\cyrrery}{PU}{\84\113}% U+044B
 16483 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
 16484 \DeclareTextCommand{\cyr sftsn}{PU}{\84\114}% U+044C
 16485 %* \cyr sftsn -> \softsign (tipa)
 16486 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
 16487 \DeclareTextCommand{\cyrrerev}{PU}{\84\115}% U+044D
 16488 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
 16489 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
 16490 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
 16491 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
 16492 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
 16493 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
 16494 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
 16495 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
 16496 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
 16497 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
 16498 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
 16499 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
 16500 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
 16501 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
 16502 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
 16503 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
 16504 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
 16505 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
 16506 % *afii10103, icyrillic
 16507 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
 16508 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
 16509 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
 16510 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457

16511 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
16512 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
16513 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
16514 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
16515 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
16516 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
16517 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
16518 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
16519 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
16520 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
16521 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
16522 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
16523 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
16524 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
16525 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
16526 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
16527 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
16528 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
16529 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
16530 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
16531 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
16532 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
16533 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
16534 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
16535 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
16536 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
16537 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
16538 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
16539 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
16540 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
16541 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
16542 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
16543 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
16544 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
16545 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
16546 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleioti-
fiedcyrillic
16547 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
16548 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
16549 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
16550 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
16551 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
16552 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
16553 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
16554 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic
16555 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
16556 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
16557 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
16558 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
16559 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
16560 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic

16561 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 16562 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 16563 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 16564 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 16565 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 16566 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 16567 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 16568 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 16569 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 16570 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 16571 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 16572 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 16573 % GRAVE ACCENT; Izhitsadblgravecyrillic
 16574 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 16575 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 16576 % GRAVE ACCENT; izhitsadblgravecyrillic
 16577 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 16578 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 16579 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 16580 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 16581 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 16582 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 16583 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 16584 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 16585 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 16586 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 16587 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 16588 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 16589 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 16590 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 16591 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 16592 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 16593 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 16594 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 16595 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 16596 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 16597 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 16598 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 16599 \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; psilipneumatacyrillicmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 16600 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL

16601 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
16602 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
16603 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
16604 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
16605 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
16606 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
16607 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
16608 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
16609 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
16610 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
16611 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
16612 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
cyrillic, *afii10050
16613 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
16614 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
upturncyrillic
16615 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
16616 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
cyrillic
16617 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
16618 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
16619 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
16620 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
16621 % Ghemiddlehookcyrillic
16622 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
16623 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
16624 % ghemiddlehookcyrillic
16625 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
16626 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
16627 % Zhedescendercyrillic
16628 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
16629 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
16630 % zhedescendercyrillic
16631 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
16632 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
dercyrillic
16633 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
16634 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
16635 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
cyrillic
16636 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
16637 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
16638 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
dercyrillic
16639 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
16640 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
dercyrillic
16641 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
16642 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
16643 % Kavertikalstrokecyrillic
16644 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
16645 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
16646 % kavertikalstrokecyrillic
16647 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D

16648 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 16649 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 16650 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 16651 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
 16652 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 16653 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 16654 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 16655 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 16656 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 16657 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 16658 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescen-
 dercyrillic
 16659 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 16660 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 16661 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 16662 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 16663 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 16664 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic
 16665 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 16666 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
 hookcyrillic
 16667 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 16668 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
 lic
 16669 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 16670 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 16671 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 16672 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
 dercyrillic
 16673 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 16674 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 16675 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescen-
 dercyrillic
 16676 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 16677 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 16678 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
 dercyrillic
 16679 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 16680 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescen-
 dercyrillic
 16681 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 16682 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 16683 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 16684 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 16685 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 16686 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
 traightstrokecyrillic
 16687 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 16688 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
 traightstrokecyrillic
 16689 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
 16690 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescen-

dercyrillic
 16691 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 16692 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
 dercyrillic
 16693 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 16694 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 16695 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 16696 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 16697 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 16698 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 16699 % Chedescendercyrillic
 16700 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 16701 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dercyrillic
 16702 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
 16703 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
 16704 % Cheverticalstrokecyrillic
 16705 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 16706 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
 16707 % cheverticalstrokecyrillic
 16708 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 16709 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 16710 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 16711 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 16712 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 16713 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 16714 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 16715 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 16716 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 16717 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 16718 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 16719 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 16720 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 16721 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 16722 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 16723 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 16724 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 16725 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 16726 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 16727 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 16728 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 16729 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 16730 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 16731 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 16732 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 16733 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 16734 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 16735 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 16736 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 16737 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic

16738 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 16739 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 16740 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 16741 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 16742 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 16743 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 16744 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 16745 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 16746 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 16747 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 16748 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 16749 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 16750 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 16751 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 16752 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 16753 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyri-
 lic
 16754 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 16755 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 16756 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 16757 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 16758 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 16759 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 16760 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 16761 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 16762 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 16763 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 16764 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 16765 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 16766 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 16767 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 16768 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
 16769 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 16770 % Schwadiescyrillic
 16771 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 16772 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 16773 % schwadiescyrillic
 16774 \DeclareTextCompositeCommand{\U}{PU}{\cyrswa}{\84\333}% U+04DB
 16775 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 16776 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 16777 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieres-
 cyrillic
 16778 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 16779 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieres-
 cyrillic
 16780 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
 16781 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresicyril-
 lic
 16782 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
 16783 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-

cyrillic

16784 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0

16785 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic

16786 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1

16787 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic

16788 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2

16789 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic

16790 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3

16791 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic

16792 \DeclareTextCompositeCommand{\"}{PU}{\CYRI}{\84\344}% U+04E4

16793 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic

16794 \DeclareTextCompositeCommand{\"}{PU}{\cyri}{\84\345}% U+04E5

16795 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic

16796 \DeclareTextCompositeCommand{\"}{PU}{\CYRO}{\84\346}% U+04E6

16797 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic

16798 \DeclareTextCompositeCommand{\"}{PU}{\cyro}{\84\347}% U+04E7

16799 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic

16800 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8

16801 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic

16802 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9

16803 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;

16804 % Obarreddieresiscyrillic

16805 \DeclareTextCompositeCommand{\"}{PU}{\CYROTLD}{\84\352}% U+04EA

16806 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;

16807 % obarreddieresiscyrillic

16808 \DeclareTextCompositeCommand{\"}{PU}{\cyrotld}{\84\353}% U+04EB

16809 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS

16810 \DeclareTextCompositeCommand{\"}{PU}{\CYREREV}{\84\354}% U+04EC

16811 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS

16812 \DeclareTextCompositeCommand{\"}{PU}{\cyreref}{\84\355}% U+04ED

16813 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic

16814 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE

16815 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic

16816 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF

16817 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic

16818 \DeclareTextCompositeCommand{\"}{PU}{\CYRU}{\84\360}% U+04F0

16819 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic

16820 \DeclareTextCompositeCommand{\"}{PU}{\cyru}{\84\361}% U+04F1

16821 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic

16822 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2

16823 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic

16824 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3

16825 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic

16826 \DeclareTextCompositeCommand{\"}{PU}{\CYRCH}{\84\364}% U+04F4

16827 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic

16828 \DeclareTextCompositeCommand{\"}{PU}{\cyrch}{\84\365}% U+04F5

16829 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER

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16830 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
16831 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
16832 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
16833 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
      siscyrillic
16834 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
16835 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
      siscyrillic
16836 \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
16837 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
16838 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
16839 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
16840 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
16841 \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

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16842 \ifx\hebdalet\@undefined\else
16843 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
16844 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
16845 % U+05D0 HEBREW LETTER ALEF
16846 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
16847 % U+05D1 HEBREW LETTER BET
16848 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
16849 % U+05D2 HEBREW LETTER GIMEL
16850 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
16851 % U+05D3 HEBREW LETTER DALET
16852 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
16853 % U+05D4 HEBREW LETTER HE
16854 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
16855 % U+05D5 HEBREW LETTER VAV
16856 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
16857 % U+05D6 HEBREW LETTER ZAYIN
16858 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
16859 % U+05D7 HEBREW LETTER HET
16860 \DeclareTextCommand{\hebbhet}{PU}{\85\327}% U+05D7
16861 % U+05D8 HEBREW LETTER TET
16862 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
16863 % U+05D9 HEBREW LETTER YOD
16864 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
16865 % U+05DA HEBREW LETTER FINAL KAF
16866 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
16867 % U+05DB HEBREW LETTER KAF
16868 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB

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16869 % U+05DC HEBREW LETTER LAMED
 16870 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
 16871 % U+05DD HEBREW LETTER FINAL MEM
 16872 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
 16873 % U+05DE HEBREW LETTER MEM
 16874 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 16875 % U+05DF HEBREW LETTER FINAL NUN
 16876 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 16877 % U+05E0 HEBREW LETTER NUN
 16878 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 16879 % U+05E1 HEBREW LETTER SAMEKH
 16880 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 16881 % U+05E2 HEBREW LETTER AYIN
 16882 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 16883 % U+05E3 HEBREW LETTER FINAL PE
 16884 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 16885 % U+05E4 HEBREW LETTER PE
 16886 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 16887 % U+05E5 HEBREW LETTER FINAL TSADI
 16888 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 16889 % U+05E6 HEBREW LETTER TSADI
 16890 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 16891 % U+05E7 HEBREW LETTER QOF
 16892 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 16893 % U+05E8 HEBREW LETTER RESH
 16894 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 16895 % U+05E9 HEBREW LETTER SHIN
 16896 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 16897 %* \hebshin -> \hebsin (he8)
 16898 % U+05EA HEBREW LETTER TAV
 16899 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 16900 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 16901 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 16902 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 16903 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 16904 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 16905 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
 16906 \fi

46.2.12 Thai: U+0E00 to U+0E7F

16907 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 16908 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

46.2.13 Phonetic Extensions: U+1D00 to U+1D7F

16909 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsca (tipa)
 16910 \DeclareTextCommand{\textsca}{PU}{\9035\000}% U+1D00
 16911 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 16912 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 16913 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 16914 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 16915 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 16916 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 16917 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscck (tipx)

16918 \DeclareTextCommand{\textPUscck}{PU}{\9035\013}% U+1D0B
 16919 %* \textPUscck -> \textscck (tipx)
 16920 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 16921 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 16922 %* \textPUscm -> \textscm (tipx)
 16923 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
 16924 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
 16925 %* \textPUscp -> \textscp (tipx)
 16926 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 16927 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 16928 %* \textPUrevscr -> \textrevscr (tipx)
 16929 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 16930 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 16931 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 16932 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 16933 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 16934 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 16935 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 16936 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 16937 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 16938 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 16939 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 16940 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 16941 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 16942 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 16943 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 16944 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 16945 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 16946 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 16947 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 16948 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 16949 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 16950 % \barsci (wsuipa)
 16951 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 16952 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 16953 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 16954 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 16955 % \barscu (wsuipa)
 16956 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

46.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

16957 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 16958 \DeclareTextCommand{\textPUrhooka}{PU}{\9035\217}% U+1D8F
 16959 %* \textPUrhooka -> \textrhooka (tipx)
 16960 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 16961 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 16962 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 16963 \DeclareTextCommand{\textPUrhooke}{PU}{\9035\222}% U+1D92
 16964 %* \textPUrhooke -> \textrhooke (tipx)
 16965 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 16966 % \textrhookepsilon (tipx)

16967 \DeclareTextCommand{\textPUrhookepsilon}{PU}{\9035\223}% U+1D93
 16968 %* \textPUrhookepsilon -> \textrhookepsilon (tipx)
 16969 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 16970 % \textrhookopeno (tipx)
 16971 \DeclareTextCommand{\textPUrhookopeno}{PU}{\9035\227}% U+1D97
 16972 %* \textPUrhookopeno -> \textrhookopeno (tipx)

46.2.15 Latin Extended Additional: U+1E00 to U+1EFF

16973 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 16974 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 16975 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 16976 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 16977 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 16978 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 16979 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 16980 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 16981 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 16982 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 16983 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 16984 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 16985 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 16986 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 16987 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 16988 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 16989 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 16990 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 16991 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 16992 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 16993 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
 16994 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
 16995 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
 16996 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
 16997 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 16998 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 16999 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 17000 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 17001 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 17002 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 17003 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 17004 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 17005 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
 cumflexbelow
 17006 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
 17007 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
 cumflexbelow
 17008 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
 17009 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
 17010 % Emacrongrave
 17011 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
 17012 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
 17013 % emacrongrave
 17014 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
 17015 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
 17016 % Emacronacute

17017 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17018 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17019 % emacronacute
17020 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17021 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
17022 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17023 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
17024 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17025 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17026 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17027 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17028 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17029 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17030 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17031 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17032 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17033 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17034 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20
17035 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
17036 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
17037 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17038 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
17039 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17040 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
17041 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17042 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
17043 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17044 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
17045 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17046 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
17047 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17048 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
17049 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17050 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
17051 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17052 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
17053 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17054 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
17055 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17056 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
17057 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17058 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
17059 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17060 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
17061 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17062 \DeclareTextCompositeCommand{'}{PU}{K}{\9036\060}% U+1E30
17063 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17064 \DeclareTextCompositeCommand{'}{PU}{k}{\9036\061}% U+1E31
17065 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17066 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
17067 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17068 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33

17069 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
 17070 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
 17071 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
 17072 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
 17073 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
 17074 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
 17075 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
 17076 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
 17077 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
 17078 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
 17079 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
 17080 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
 17081 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
 cumflexbelow
 17082 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
 17083 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
 cumflexbelow
 17084 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
 17085 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
 17086 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
 17087 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
 17088 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
 17089 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
 17090 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
 17091 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
 17092 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
 17093 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
 17094 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
 17095 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
 17096 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
 17097 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
 17098 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
 17099 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
 17100 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
 17101 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
 17102 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
 17103 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
 17104 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
 17105 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
 17106 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
 17107 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
 17108 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
 17109 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
 cumflexbelow
 17110 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
 17111 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
 cumflexbelow
 17112 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
 17113 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
 17114 % Omacrongrave
 17115 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
 17116 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
 17117 % omacrongrave
 17118 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51

17119 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
 17120 % Omacronacute
 17121 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
 17122 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 17123 % omacronacute
 17124 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 17125 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 17126 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 17127 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 17128 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 17129 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 17130 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 17131 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 17132 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 17133 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 17134 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 17135 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 17136 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 17137 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 17138 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
 17139 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 17140 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 17141 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 17142 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 17143 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 17144 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 17145 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 17146 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 17147 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 17148 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 17149 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 17150 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 17151 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 17152 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 17153 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 17154 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 17155 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 17156 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 17157 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 17158 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 17159 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 17160 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 17161 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 17162 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 17163 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 17164 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 17165 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 17166 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 17167 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 17168 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 17169 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow

17170 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17171 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udieresis-
below
17172 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17173 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17174 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17175 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17176 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17177 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
cumflexbelow
17178 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17179 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
cumflexbelow
17180 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17181 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17182 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17183 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17184 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17185 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17186 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17187 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
17188 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17189 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17190 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17191 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17192 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17193 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17194 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17195 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17196 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17197 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17198 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17199 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17200 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17201 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17202 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17203 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17204 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17205 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17206 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17207 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17208 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17209 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17210 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17211 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17212 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17213 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17214 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
17215 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17216 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
17217 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17218 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17219 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17220 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F

17221 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17222 \DeclareTextCompositeCommand{\~}{PU}{Z}{\9036\220}% U+1E90
17223 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17224 \DeclareTextCompositeCommand{\~}{PU}{z}{\9036\221}% U+1E91
17225 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17226 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17227 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17228 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17229 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17230 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17231 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17232 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17233 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17234 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17235 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17236 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
17237 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17238 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
17239 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17240 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
17241 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
17242 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
17243 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
17244 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
17245 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
17246 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
17247 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
17248 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
17249 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
17250 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
17251 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
17252 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
17253 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
17254 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
17255 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
17256 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
17257 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
17258 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
17259 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
17260 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
17261 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
17262 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
17263 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
17264 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
17265 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
17266 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
17267 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
17268 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
17269 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
17270 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
17271 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
17272 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
17273 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow

17274 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 17275 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 17276 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 17277 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 17278 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

46.2.16 General Punctuation: U+2000 to U+206F

17279 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 17280 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 17281 % U+2013 EN DASH; endash
 17282 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 17283 % U+2014 EM DASH; emdash
 17284 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 17285 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 17286 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 17287 %* \textbardbl -> \textdoublevertline (tipa)
 17288 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 17289 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 17290 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 17291 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 17292 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 17293 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 17294 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 17295 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 17296 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 17297 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 17298 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 17299 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 17300 % U+2020 DAGGER; dagger
 17301 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 17302 %* \textdagger -> \dag (LaTeX)
 17303 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 17304 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 17305 %* \textdaggerdbl -> \ddagger (LaTeX)
 17306 %* \textdaggerdbl -> \ddag (LaTeX)
 17307 % U+2022 BULLET; bullet
 17308 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 17309 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 17310 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 17311 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 17312 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 17313 %* \textellipsis -> \mathellipsis
 17314 % U+2030 PER MILLE SIGN; perthousand
 17315 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 17316 % U+2031 PER TEN THOUSAND SIGN
 17317 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 17318 % U+2032 PRIME; minute; \prime (MnSymbol)
 17319 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 17320 % U+2033 DOUBLE PRIME; \second (mathabx)
 17321 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 17322 % U+2034 TRIPLE PRIME; \third (mathabx)
 17323 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 17324 % U+2035 REVERSED PRIME; \backprime (AmS)
 17325 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035

17326 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 17327 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 17328 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 17329 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 17330 % U+203B REFERENCE MARK; referencemark
 17331 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 17332 % U+203D INTERROBANG
 17333 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 17334 % U+2044 FRACTION SLASH; fraction
 17335 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 17336 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 17337 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 17338 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 17339 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 17340 % U+2052 COMMERCIAL MINUS SIGN
 17341 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 17342 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 17343 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 17344 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 17345 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 17346 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 17347 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

46.2.17 Superscripts and Subscripts: U+2070 to U+209F

17348 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 17349 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 17350 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 17351 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 17352 % U+2074 SUPERSCRIPT FOUR; foursuperior
 17353 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 17354 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 17355 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 17356 % U+2076 SUPERSCRIPT SIX; sixsuperior
 17357 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 17358 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 17359 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 17360 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 17361 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 17362 % U+2079 SUPERSCRIPT NINE; ninesuperior
 17363 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 17364 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 17365 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 17366 % U+207B SUPERSCRIPT MINUS
 17367 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 17368 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 17369 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 17370 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 17371 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 17372 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 17373 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 17374 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 17375 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F

17376 % U+2080 SUBSCRIPT ZERO; zeroinferior
17377 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
17378 % U+2081 SUBSCRIPT ONE; oneinferior
17379 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
17380 % U+2082 SUBSCRIPT TWO; twoinferior
17381 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
17382 % U+2083 SUBSCRIPT THREE; threeinferior
17383 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
17384 % U+2084 SUBSCRIPT FOUR; fourinferior
17385 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
17386 % U+2085 SUBSCRIPT FIVE; fiveinferior
17387 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
17388 % U+2086 SUBSCRIPT SIX; sixinferior
17389 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
17390 % U+2087 SUBSCRIPT SEVEN; seveninferior
17391 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
17392 % U+2088 SUBSCRIPT EIGHT; eightinferior
17393 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
17394 % U+2089 SUBSCRIPT NINE; nineinferior
17395 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
17396 % U+208A SUBSCRIPT PLUS SIGN
17397 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
17398 % U+208B SUBSCRIPT MINUS
17399 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
17400 % U+208C SUBSCRIPT EQUALS SIGN
17401 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
17402 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
17403 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
17404 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
17405 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
17406 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
17407 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
17408 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
17409 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
17410 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
17411 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
17412 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
17413 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
17414 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
17415 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
17416 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
17417 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
17418 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
17419 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
17420 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
17421 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
17422 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
17423 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
17424 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
17425 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
17426 % U+209A LATIN SUBSCRIPT SMALL LETTER P
17427 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
17428 % U+209B LATIN SUBSCRIPT SMALL LETTER S
17429 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B

17430 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 17431 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

46.2.18 Currency Symbols: U+20A0 to U+20CF

17432 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 17433 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 17434 % U+20A4 LIRA SIGN; afi08941, *lira
 17435 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 17436 % U+20A6 NAIRA SIGN
 17437 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 17438 % U+20A7 PESETA SIGN; peseta
 17439 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 17440 % U+20A9 WON SIGN; won
 17441 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 17442 % U+20AB DONG SIGN; dong
 17443 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 17444 % U+20AC EURO SIGN; *Euro, euro
 17445 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 17446 %* \texteuro -> \EurDig (marvosym)
 17447 %* \texteuro -> \EURdig (marvosym)
 17448 %* \texteuro -> \EurHv (marvosym)
 17449 %* \texteuro -> \EURhv (marvosym)
 17450 %* \texteuro -> \EurCr (marvosym)
 17451 %* \texteuro -> \EURcr (marvosym)
 17452 %* \texteuro -> \EurTm (marvosym)
 17453 %* \texteuro -> \EURtm (marvosym)
 17454 %* \texteuro -> \Eur (marvosym)
 17455 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 17456 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 17457 %* \textDeleatur -> \Denarius (marvosym)
 17458 % U+20B1 PESO SIGN
 17459 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 17460 % U+20B2 GUARANI SIGN
 17461 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

46.2.19 Letterlike Symbols: U+2100 to U+214F

17462 % U+2103 DEGREE CELSIUS; centigrade
 17463 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 17464 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 17465 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 17466 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 17467 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 17468 % U+2113 SCRIPT SMALL L (=ell, liter); afi61289, lsquare; \ell (LaTeX)
 17469 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 17470 % U+2116 NUMERO SIGN; *afi61352, numero
 17471 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 17472 % U+2117 SOUND RECORDING COPYRIGHT
 17473 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 17474 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 17475 % weierstrass; \wp (LaTeX)
 17476 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 17477 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 17478 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C

17479 % U+211E PRESCRIPTION TAKE; prescription
 17480 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 17481 % U+2120 SERVICE MARK
 17482 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 17483 % U+2122 TRADE MARK SIGN; trademark
 17484 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 17485 % U+2126 OHM SIGN; Ohm, Omega
 17486 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 17487 % U+2127 INVERTED OHM SIGN
 17488 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 17489 %* \textmho -> \agemO (wasysym)
 17490 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 17491 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 17492 % U+212B ANGSTROM SIGN; angstrom
 17493 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 17494 % U+212E ESTIMATED SYMBOL; estimated
 17495 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 17496 %* \textestimated -> \EstimatedSign (marvosym)
 17497 %* \textestimated -> \Ecommerce (marvosym)
 17498 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 17499 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 17500 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 17501 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 17502 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 17503 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 17504 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 17505 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 17506 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 17507 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 17508 % U+213B FACSIMILE SIGN; \fax (marvosym)
 17509 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 17510 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 17511 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 17512 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 17513 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 17514 %* \textinvamp -> \bindnasrepma (stmaryrd)
 17515 %* \textinvamp -> \parr (cml)

46.2.20 Number Forms: U+2150 to U+218F

17516 % U+2150 VULGAR FRACTION ONE SEVENTH
 17517 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 17518 % U+2151 VULGAR FRACTION ONE NINTH
 17519 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 17520 % U+2152 VULGAR FRACTION ONE TENTH
 17521 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 17522 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 17523 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 17524 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 17525 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 17526 % U+2155 VULGAR FRACTION ONE FIFTH
 17527 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 17528 % U+2156 VULGAR FRACTION TWO FIFTHS
 17529 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 17530 % U+2157 VULGAR FRACTION THREE FIFTHS

17531 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 17532 % U+2158 VULGAR FRACTION FOUR FIFTHS
 17533 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 17534 % U+2159 VULGAR FRACTION ONE SIXTH
 17535 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 17536 % U+215A VULGAR FRACTION FIVE SIXTHS
 17537 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 17538 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 17539 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 17540 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 17541 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 17542 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 17543 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 17544 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 17545 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 17546 % U+2184 LATIN SMALL LETTER REVERSED C
 17547 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 17548 % U+2189 VULGAR FRACTION ZERO THIRDS
 17549 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

46.2.21 Arrows: U+2190 to U+21FF

17550 % U+2190 LEFTWARDS ARROW; arrowleft
 17551 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 17552 % U+2191 UPWARDS ARROW; arrowup
 17553 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 17554 % U+2192 RIGHTWARDS ARROW; arrowright
 17555 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 17556 %* \textrightarrow -> \MVRightArrow (marvosym)
 17557 %* \textrightarrow -> \MVRightarrow (marvosym)
 17558 % U+2193 DOWNWARDS ARROW; arrowdown
 17559 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 17560 %* \textdownarrow -> \MVArrowDown (marvosym)
 17561 %* \textdownarrow -> \Force (marvosym)
 17562 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 17563 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 17564 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 17565 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 17566 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 17567 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 17568 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 17569 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 17570 %* \textnearrow -> \textglobrise (tipa)
 17571 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 17572 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
 17573 %* \textsearrow -> \textglobfall (tipa)
 17574 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
 17575 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
 17576 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
 17577 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
 17578 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
 17579 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
 17580 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
 17581 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
 17582 % \ntwoheadleftarrow (txfonts/pxfonts)


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17583 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
17584 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
17585 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
17586 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
17587 % \twoheadrightarrow (AmS)
17588 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
17589 % \ntwoheadrightarrow (txfonts/pxfonts)
17590 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
17591 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
17592 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
17593 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
17594 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
17595 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
17596 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
17597 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
17598 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
17599 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
17600 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
17601 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
17602 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
17603 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
17604 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
17605 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
17606 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
17607 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightharrow (AmS)
17608 \DeclareTextCommand{\textnleftrightharrow}{PU}{\9041\256}%* U+21AE
17609 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
17610 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
17611 %* \textlightning -> \Lightning (marvosym)
17612 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
17613 % \dsh (mathabx)
17614 \DeclareTextCommand{\textdsh}{PU}{\9041\265}%* U+21B5
17615 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
17616 % \curvearrowleft (AmS)
17617 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
17618 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
17619 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
17620 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;
17621 % \leftharpoonup (LaTeX)
17622 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
17623 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
17624 % \leftharpoondown (LaTeX)
17625 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
17626 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
17627 % \upharpoonright (AmS)
17628 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
17629 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
17630 % \upharpoonleft (AmS)
17631 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
17632 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
barbup
17633 % \rightharpoonup (LaTeX)

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17634 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
17635 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
17636 % \rightharpoondown (LaTeX)
17637 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
17638 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
17639 % \downharpoonright (AmS)
17640 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
17641 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
17642 % \downharpoonleft (AmS)
17643 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
17644 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
17645 % arrowrightoverleft; \rightleftarrows (MnSymbol)
17646 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
17647 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
rowupleftofdown;
17648 % \updownarrows (MnSymbol)
17649 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
17650 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
overright;
17651 % \leftrightarrows (AmS)
17652 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
17653 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
17654 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
17655 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
17656 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
17657 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
17658 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
17659 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
17660 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
17661 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
17662 % \leftrightharpoons (AmS);
17663 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
17664 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
17665 % \rightleftharpoons (LaTeX, AmS)
17666 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
17667 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
blstroke;
17668 % \nLeftarrow (AmS)
17669 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
17670 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightar-
row (AmS)
17671 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
17672 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
blstroke;
17673 % \nRightarrow (AmS)
17674 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
17675 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
17676 % \Leftarrow (LaTeX)
17677 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
17678 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
17679 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
17680 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
17681 % \Rightarrow (LaTeX)
17682 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2

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17683 %* \textRrightarrow -> \Conclusion (marvosym)
17684 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdblDOWN; \Downarrow (La-
TeX)
17685 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
17686 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
17687 % \Leftrightarrow (LaTeX)
17688 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
17689 %* \textLeftrightarrow -> \Equivalence (marvosym)
17690 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
17691 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
17692 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
17693 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
17694 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
17695 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
17696 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
17697 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
17698 % U+21D9 SOUTH WEST DOUBLE ARROW; \Svarrow (MnSymbol)
17699 \DeclareTextCommand{\textSvarrow}{PU}{\9041\331}%* U+21D9
17700 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
17701 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
17702 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
17703 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
17704 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
17705 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
17706 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
17707 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
17708 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
17709 % \dashleftarrow (AmS)
17710 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
17711 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
17712 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
17713 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
17714 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightar-
row (AmS)
17715 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
17716 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
17717 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
17718 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
17719 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
17720 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
17721 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
17722 % \downuparrows (MnSymbol)
17723 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
17724 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
17725 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
17726 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
17727 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
17728 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtri-
angle (stmaryrd)
17729 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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46.2.22 Mathematical Operators: U+2200 to U+22FF

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17730 % U+2200 FOR ALL; forall; \forall (LaTeX)
17731 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
17732 % U+2201 COMPLEMENT; \complement (AmS)
17733 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
17734 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
17735 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
17736 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
17737 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
17738 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
17739 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
17740 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
17741 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
17742 %* \textemptyset -> \varnothing (AmS)
17743 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
17744 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
17745 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
17746 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
17747 % U+2208 ELEMENT OF; element; \in (LaTeX)
17748 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
17749 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
17750 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
17751 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
17752 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
17753 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
17754 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
17755 %* \textni -> \owns (mathabx)
17756 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
17757 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
17758 %* \textnotowner -> \notni (txfonts/pxfonts)
17759 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
17760 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
17761 % U+220F N-ARY PRODUCT; \prod (LaTeX)
17762 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
17763 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
17764 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
17765 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
17766 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
17767 % U+2212 MINUS SIGN; minus
17768 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
17769 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
17770 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
17771 % U+2214 DOT PLUS; \dotplus (AmS)
17772 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
17773 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
17774 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
17775 % \DividesNot (marvosym)
17776 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
17777 % U+2216 SET MINUS; \setminus (LaTeX)
17778 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
17779 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
17780 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
17781 % U+2218 RING OPERATOR; \circ (LaTeX)
17782 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
17783 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)

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17784 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
17785 % U+221A SQUARE ROOT; radical
17786 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
17787 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
17788 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
17789 %* \textpropto -> \varprop (wasysym)
17790 % U+221E INFINITY; infinity; \infty (LaTeX)
17791 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
17792 % U+2220 ANGLE; angle; \angle (LaTeX)
17793 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
17794 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
17795 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
17796 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
17797 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
17798 %* \textsphericalangle -> \varangle (wasysym)
17799 %* \textsphericalangle -> \Anglesign (marvosym)
17800 %* \textsphericalangle -> \AngleSign (marvosym)
17801 % U+2223 DIVIDES; divides; \mid (LaTeX)
17802 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
17803 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
17804 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
17805 %* \textnmid -> \notdivides (mathabx)
17806 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
17807 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
17808 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
17809 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
17810 %* \textnparallel -> nUpdownline (MnSymbol)
17811 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
17812 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
17813 % \owedge (stmaryrd)
17814 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
17815 %* \textowedge -> \varowedge (stmaryrd)
17816 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
17817 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
17818 % \ovee (stmaryrd)
17819 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
17820 %* \textovee -> \varovee (stmaryrd)
17821 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
17822 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
17823 % U+222A UNION; union; \cup (LaTeX)
17824 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
17825 % U+222B INTEGRAL; integral; \int (LaTeX)
17826 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
17827 %* \textint -> \varint (wasysym)
17828 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
17829 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
17830 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
17831 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
17832 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
17833 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
17834 %* \textoint -> \varoint (wasysym)
17835 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
17836 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
17837 % U+2232 CLOCKWISE CONTOUR INTEGRAL;

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17838 % \ointclockwise (txfonts/pxfonts)
17839 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
17840 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
      fonts/pxfonts)
17841 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
17842 % U+2234 THEREFORE; therefore; \therefore (AmS)
17843 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
17844 %* \texttherefore -> uptherefore (MnSymbol)
17845 % U+2235 BECAUSE; because; \because (AmS)
17846 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
17847 %* \textbecause -> \downtherefore (MnSymbol)
17848 % U+2236 RATIO; \vdotdot (MnSymbol)
17849 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
17850 % U+2237 PROPORTION; \squaredots (MnSymbol)
17851 \DeclareTextCommand{\textssquaredots}{PU}{\9042\067}%* U+2237
17852 % U+2238 DOT MINUS; \dotminus (MnSymbol)
17853 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
17854 %* \textdotminus -> \textdotdiv (mathabx)
17855 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
17856 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
17857 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
17858 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
17859 %* \textsim -> \AC (wasysym)
17860 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
17861 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
17862 % \nbacksim (txfonts/pxfonts)
17863 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
17864 % U+2240 WREATH PRODUCT; \wr (LaTeX)
17865 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
17866 %* \textwr -> \wreath (MnSymbol)
17867 % U+2241 NOT TILDE; \nsim (AmS)
17868 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
17869 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
17870 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
17871 % \neqsim (MnSymbol)
17872 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
17873 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
      TeX)
17874 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
17875 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
17876 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
17877 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
17878 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
17879 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
17880 % \ncong (AmS)
17881 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
17882 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
17883 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
17884 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
17885 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
17886 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
17887 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
17888 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
17889 % \napproxeq (txfonts/pxfonts)

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17890 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
17891 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
17892 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
17893 %* \texttriplesim -> \VHF (wasysym)
17894 % \ntriplesim (MnSymbol)
17895 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
17896 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
17897 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
17898 % \nbackcong (MnSymbol)
17899 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
17900 % U+224D EQUIVALENT TO; \asymp (LaTeX)
17901 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
17902 % \nasymp (txfonts/pxfonts)
17903 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
17904 %* \textnasymp -> \notasymp (mathabx)
17905 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
17906 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
17907 % \nBumpeq (txfonts/pxfonts)
17908 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
17909 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
17910 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
17911 % \nbumpeq (txfonts/pxfonts)
17912 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
17913 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
17914 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
17915 % \ndoteq (MnSymbol)
17916 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
17917 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
17918 % \doteqdot (AmS)
17919 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
17920 %* \textdoteqdot -> \Doteq (MnSymbol)
17921 % \nDoteq (MnSymbol)
17922 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
17923 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
17924 % equalorimage;
17925 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
17926 % \nfallingdotseq (MnSymbol)
17927 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
17928 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
17929 % matelyequal;
17929 % \risingdotseq (AmS)
17930 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
17931 % \nrisingdotseq (MnSymbol)
17932 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
17933 % U+2254 COLON EQUALS; \colonequals (colonequals)
17934 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
17935 % U+2255 EQUALS COLON; \equalscolon (colonequals)
17936 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
17937 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
17938 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
17939 % \neqcirc (MnSymbol)
17940 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
17941 % U+2257 RING EQUAL TO; \circeq (AmS)

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17942 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
17943 % \ncirceq (MnSymbol)
17944 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
17945 % U+2259 ESTIMATES; \hateq (MnSymbol)
17946 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
17947 %* \texthateq -> \corresponds (mathabx)
17948 %* \texthateq -> \Corresponds (marvosym)
17949 % \nhateq (MnSymbol)
17950 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
17951 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
17952 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
17953 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
17954 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
17955 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
17956 %* \textneq -> \nequal (MnSymbol)
17957 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
17958 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
17959 %* \textequiv -> \Congruent (marvosym)
17960 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
17961 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
17962 %* \textnequiv -> \NotCongruent (marvosym)
17963 %* \textnequiv -> \notequiv (mathabx)
17964 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
17965 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
17966 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
17967 %* \textleq -> \LessOrEqual (marvosym)
17968 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
17969 % \ge (LaTeX), \geq (LaTeX)
17970 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
17971 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
17972 %* \textgeq -> \LargerOrEqual (marvosym)
17973 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
17974 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
17975 % \nleqq (txfonts/pxfonts)
17976 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
17977 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
17978 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
17979 % \ngeqq (txfonts/pxfonts)
17980 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
17981 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
17982 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
17983 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
17984 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
17985 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
17986 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
17987 % \nll (txfonts/pxfonts)
17988 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
17989 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
17990 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
17991 % \ngg (txfonts/pxfonts)
17992 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
17993 % U+226C BETWEEN; \between (AmS)
17994 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
17995 % U+226E NOT LESS-THAN; notless; \nless (AmS)

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17996 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
17997 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
17998 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
17999 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
18000 % \nleq (AmS)
18001 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
18002 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternore-
18003 % qual; \ngeq (AmS)
18003 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
18004 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
18005 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
18006 %* \textlessim -> \apprle (wasysym)
18007 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtr-
18008 % sim (AmS)
18008 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
18009 %* \textgtrsim -> \apprge (wasysym)
18010 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-
18011 % fonts/pxfonts)
18011 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18012 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-
18013 % fonts/pxfonts)
18013 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18014 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18015 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18016 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18017 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18018 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
18019 % fonts/pxfonts)
18019 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18020 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
18021 % fonts/pxfonts)
18021 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18022 % U+227A PRECEDES; precedes; \prec (LaTeX)
18023 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18024 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18025 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18026 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18027 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18028 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18029 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18030 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18031 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18032 % \nprecsim (txfonts/pxfonts)
18033 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18034 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18035 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18036 % \nsuccsim (txfonts/pxfonts)
18037 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18038 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18039 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18040 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
18041 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18042 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18043 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282

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18044 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18045 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18046 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18047 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18048 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18049 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18050 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18051 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18052 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18053 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18054 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18055 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18056 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18057 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18058 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subsetneq (AmS)
18059 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18060 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supsetneq (AmS)
18061 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18062 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
18063 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18064 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18065 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18066 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18067 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18068 % \nsqsubset (txfonts/pxfonts)
18069 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18070 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18071 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18072 % \nsqsupset (txfonts/pxfonts)
18073 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18074 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18075 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18076 % \nsqsubseteq (txfonts/pxfonts)
18077 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18078 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18079 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18080 % \nsqsupseteq (txfonts/pxfonts)
18081 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18082 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18083 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18084 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18085 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18086 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18087 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18088 %* \textoplus -> \varoplus (stmaryrd)
18089 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18090 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18091 %* \textominus -> \varominus (stmaryrd)
18092 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18093 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18094 %* \textotimes -> \varotimes (stmaryrd)
18095 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)

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18096 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18097 %* \textoslash -> \varoslash (stmaryrd)
18098 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18099 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18100 %* \textodot -> \varodot (stmaryrd)
18101 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18102 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18103 %* \textcircledcirc -> \ocirc (mathabx)
18104 %* \textcircledcirc -> \varocircle (stmaryrd)
18105 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18106 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18107 %* \textcircledast -> \varoast (stmaryrd)
18108 %* \textcircledast -> \oasterisk (mathabx)
18109 % U+229D CIRCLED DASH; \circleddash (AmS)
18110 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18111 % U+229E SQUARED PLUS; \boxplus (AmS)
18112 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18113 % U+229F SQUARED MINUS; \boxminus (AmS)
18114 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18115 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18116 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
18117 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18118 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18119 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18120 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18121 %* \textvdash -> \rightvdash (MnSymbol)
18122 % U+22A3 LEFT TACK; \lhd; \dashv (LaTeX)
18123 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18124 %* \textdashv -> \leftvdash (MnSymbol)
18125 % \ndashv (mathabx)
18126 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18127 %* \textndashv -> \nleftvdash (MnSymbol)
18128 % U+22A4 DOWN TACK (=top); \tackdown; \top (LaTeX)
18129 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18130 %* \texttop -> \downvdash (MnSymbol)
18131 % \ndownvdash (MnSymbol)
18132 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18133 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18134 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18135 %* \textbot -> \upvdash (MnSymbol)
18136 % \nupvdash (MnSymbol)
18137 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18138 %* \textnupvdash -> \nperp (MnSymbol)
18139 % U+22A8 TRUE; \vDash (AmS)
18140 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18141 %* \textvDash -> \models (LaTeX)
18142 %* \textvDash -> \rightmodels (MnSymbol)
18143 % U+22A9 FORCES; \Vdash (AmS)
18144 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18145 %* \textVdash -> \rightVdash (MnSymbol)
18146 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18147 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18148 % \nVdash (mathabx)
18149 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338

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18150 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18151 % \VDash (mathabx)
18152 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18153 %* \textVDash -> \rightModels (MnSymbol)
18154 % U+22AC DOES NOT PROVE; \nvDash (AmS)
18155 \DeclareTextCommand{\textnvDash}{PU}{\9042\254}%* U+22AC
18156 %* \textnvDash -> \rightvDash (MnSymbol)
18157 % U+22AD NOT TRUE; \nVDash (AmS)
18158 \DeclareTextCommand{\textnVDash}{PU}{\9042\255}%* U+22AD
18159 %* \textnVDash -> \rightmodels (MnSymbol)
18160 %* \textnVDash -> \nmodels (MnSymbol)
18161 % U+22AE DOES NOT FORCE; \Vdash (txfonts/pxfonts)
18162 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18163 %* \textnVdash -> \rightVdash (MnSymbol)
18164 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18165 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18166 %* \textnVDash -> \rightModels (MnSymbol)
18167 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18168 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18169 %* \textlhd -> \lessclosed (MnSymbol)
18170 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18171 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18172 %* \textrhd -> \gtrclosed (MnSymbol)
18173 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18174 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18175 %* \textunlhd -> \leqclosed (MnSymbol)
18176 %* \textunlhd -> \trianglelefteq (MnSymbol)
18177 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
      texsym, ...)
18178 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18179 %* \textunrhd -> \geqclosed (MnSymbol)
18180 %* \textunrhd -> \trianglerighteq (MnSymbol)
18181 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18182 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18183 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18184 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18185 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18186 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18187 % U+22BB XOR; \veebar (AmS)
18188 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18189 % U+22BC NAND; \barwedge (mathabx)
18190 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18191 % U+22C6 STAR OPERATOR; \star (LaTeX)
18192 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18193 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18194 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18195 % U+22C8 BOWTIE; \bowtie (LaTeX)
18196 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18197 %* \textbowtie -> \Bowtie (wasysym)
18198 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18199 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18200 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18201 % \rtimes (AmS)

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18202 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18203 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18204 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18205 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18206 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18207 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18208 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18209 % \nbacksimeq (txfonts/pxfonts)
18210 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18211 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18212 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18213 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18214 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18215 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18216 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18217 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18218 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18219 % \nSubset (txfonts/pxfonts)
18220 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18221 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18222 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
18223 % \nSupset (txfonts/pxfonts)
18224 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18225 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18226 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18227 %* \textCap -> \doublecap (mathabx)
18228 % U+22D3 DOUBLE UNION; \Cup (AmS)
18229 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18230 %* \textCup -> \doublecup (mathabx)
18231 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18232 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18233 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18234 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18235 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18236 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18237 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18238 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18239 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18240 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18241 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
18242 % \lesseqgtr (AmS)
18243 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18244 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterqualorless;
18245 % \gtreqless (AmS)
18246 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18247 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18248 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18249 % \ncurlyeqprec (mathabx)
18250 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18251 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18252 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18253 % \ncurlyeqsucc (mathabx)
18254 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18255 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)

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18256 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18257 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
18258 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
18259 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
      fonts/pxfonts)
18260 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
18261 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
      fonts/pxfonts)
18262 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
18263 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
18264 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
18265 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
18266 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
      abx)
18267 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
18268 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
18269 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
18270 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
18271 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
18272 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
18273 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
18274 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
18275 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
18276 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
18277 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
18278 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
18279 %* \textntriangleleft -> \nlessclosed (MnSymbol)
18280 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright
      (AmS)
18281 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
18282 %* \textntriangleright -> \ngtrclosed (MnSymbol)
18283 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
18284 % \ntrianglelefteq (AmS)
18285 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
18286 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
18287 % \ntrianglerighteq (AmS)
18288 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
18289 %* \textntrianglerighteq -> \textngeqclosed
18290 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
18291 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
18292 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
18293 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
18294 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
18295 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
18296 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
18297 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
18298 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
18299 \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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18300 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
18301 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
18302 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
18303 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310

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18304 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
18305 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
18306 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
18307 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
18308 % U+231A WATCH; \clock (wasysym)
18309 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
18310 %* \textclock -> \Clocklogo (marvosym)
18311 %* \textclock -> \ClockLogo (marvosym)
18312 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
18313 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
18314 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
18315 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
18316 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
18317 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
18318 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
18319 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
18320 % U+2322 FROWN; \frown (LaTeX)
18321 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
18322 % U+2323 SMILE; \smile (LaTeX)
18323 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
18324 % U+2328 KEYBOARD; \Keyboard (marvosym)
18325 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
18326 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \angle (LaTeX)
18327 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
18328 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
18329 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
18330 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
18331 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
18332 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
18333 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
18334 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
18335 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}%* U+233D
18336 %* \textstmaryrdbaro -> \baro (stmaryrd)
18337 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
18338 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
18339 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
18340 % \notbackslash (wasysym)
18341 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
18342 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
18343 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
18344 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
18345 % \APLleftarrowbox (wasysym)
18346 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
18347 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
18348 % \APLrightarrowbox (wasysym)
18349 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
18350 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
18351 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
18352 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
18353 % \APLdownarrowbox (wasysym)
18354 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357

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18355 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 18356 % \APLinput (wasysym)
 18357 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 18358 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 18359 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 18360 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 18361 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 18362 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 18363 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 18364 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 18365 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 18366 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 18367 % \ForwardToIndex (marvosym)
 18368 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 18369 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 18370 % \RewindToIndex (marvosym)
 18371 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

46.2.24 Control Pictures: U+2400 to U+243F

18372 % U+2422 BLANK SYMBOL
 18373 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 18374 % U+2423 OPEN BOX; blank
 18375 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

46.2.25 Optical Character Recognition: U+2440 to U+245F

18376 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 18377 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 18378 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

46.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

18379 % U+2460 CIRCLED DIGIT ONE; onecircle
 18380 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 18381 % U+2461 CIRCLED DIGIT TWO; twocircle
 18382 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 18383 % U+2462 CIRCLED DIGIT THREE; threecircle
 18384 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 18385 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 18386 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 18387 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 18388 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 18389 % U+2465 CIRCLED DIGIT SIX; sixcircle
 18390 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 18391 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle
 18392 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 18393 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 18394 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 18395 % U+2468 CIRCLED DIGIT NINE; ninecircle
 18396 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 18397 % U+2469 CIRCLED NUMBER TEN; tencircle
 18398 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 18399 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 18400 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A

18401 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
18402 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
18403 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
18404 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
18405 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
18406 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
18407 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
18408 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
18409 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
18410 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
18411 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
18412 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
18413 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
18414 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
18415 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
18416 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
18417 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
18418 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
18419 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
18420 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
18421 % \CircledA (marvosym)
18422 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
18423 %* \textCircledA -> \CleaningA
18424 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
18425 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
18426 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
18427 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
18428 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
18429 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
18430 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
18431 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
18432 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
18433 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
18434 % \CleaningF (marvosym)
18435 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
18436 % \CleaningFF (marvosym)
18437 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
18438 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
18439 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
18440 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
18441 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
18442 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
18443 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
18444 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
18445 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
18446 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
18447 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
18448 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
18449 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
18450 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
18451 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
18452 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
18453 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
18454 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle

18455 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
18456 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
18457 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
18458 % \CleaningP (marvosym)
18459 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
18460 % \CleaningPP (marvosym)
18461 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
18462 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
18463 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
18464 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
18465 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
18466 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
18467 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
18468 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
18469 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
18470 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
18471 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
18472 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
18473 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
18474 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
18475 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
18476 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
18477 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
18478 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
18479 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
18480 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
18481 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
18482 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
18483 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
18484 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
18485 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
18486 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
18487 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
18488 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
18489 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
18490 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
18491 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
18492 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
18493 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
18494 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
18495 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
18496 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
18497 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
18498 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
18499 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
18500 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
18501 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
18502 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
18503 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
18504 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
18505 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
18506 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
18507 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
18508 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle

18509 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 18510 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 18511 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 18512 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 18513 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 18514 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 18515 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 18516 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 18517 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 18518 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 18519 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 18520 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 18521 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 18522 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 18523 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 18524 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 18525 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 18526 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 18527 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 18528 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 18529 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 18530 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 18531 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 18532 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 18533 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 18534 % U+24EA CIRCLED DIGIT ZERO
 18535 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

46.2.27 Box Drawing: U+2500 to 257F

18536 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 18537 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 18538 %* \textCuttingLine -> \Kutline (marvosym)
 18539 %* \textCuttingLine -> \CutLine (marvosym)
 18540 %* \textCuttingLine -> \Cutline (marvosym)

46.2.28 Geometric Shapes: U+25A0 to U+25FF

18541 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 18542 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 18543 %* \textUParrow -> \MoveUp (marvosym)
 18544 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 18545 % \bigtriangleup (LaTeX)
 18546 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 18547 %* \textbigtriangleup -> \APLup (wasysym)
 18548 %* \textbigtriangleup -> \Bleech (marvosym)
 18549 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 18550 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 18551 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
 tion);
 18552 % whiterightpointingtriangle; \triangleright (LaTeX)
 18553 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
 18554 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 18555 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 18556 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)

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18557 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
18558 %* \textDOWNarrow -> \MoveDown (marvosym)
18559 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
      angle;
18560 % \bigtriangledown (LaTeX)
18561 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
18562 %* \textbigtriangledown -> \APLdown (wasysym)
18563 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
18564 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
18565 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
      striction);
18566 % whiteleftpointingtriangle; \triangleleft (LaTeX)
18567 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
18568 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
18569 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
18570 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
18571 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
18572 %* \textdiamond -> \Diamond (wasysym)
18573 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
18574 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
18575 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
18576 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
18577 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
18578 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
18579 % U+25E6 WHITE BULLET; *openbullet, whitebullet
18580 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
18581 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
18582 % \boxbar (stmaryrd)
18583 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
18584 % U+25EF LARGE CIRCLE; largecircle
18585 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
18586 %* \textbigcircle -> \varbigcirc (stmaryrd)
18587 %

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46.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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18588 % U+2601 CLOUD; \Cloud (ifsym)
18589 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
18590 % U+2605 BLACK STAR; \FiveStar (bding)
18591 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
18592 % U+2606 WHITE STAR; \FiveStarOpen (bding)
18593 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
18594 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bding)
18595 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
18596 %* \textPhone -> \Telefon (marvosym)
18597 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
18598 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
18599 %* \textboxempty -> \Box (wasysym)
18600 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
18601 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
18602 %* \textCheckedbox -> \CheckedBox (marvosym)
18603 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
18604 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
18605 %* \textCrossedbox -> \XBox (wasysym)
18606 %* \textCrossedbox -> \CrossedBox (marvosym)

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18607 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
18608 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
18609 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bbding)
18610 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
18611 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bbding)
18612 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
18613 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bbding)
18614 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
18615 %* \textHandLeft -> \rightpointleft (fourier)
18616 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
18617 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
18618 %* \textHandRight -> \leftpointright (fourier)
18619 %* \textHandRight -> \PointingHand (marvosym)
18620 %* \textHandRight -> \Pointinghand (marvosym)
18621 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
18622 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
18623 %* \textRadioactivity -> \Radiation (ifsym)
18624 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
18625 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
18626 % U+2625 ANKH; \Ankh (marvosym)
18627 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
18628 % U+262F YIN YANG; \YinYang (marvosym)
18629 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
18630 %* \textYinYang -> \Yinyang (marvosym)
18631 %* \textYinYang -> \YingYang (marvosym)
18632 %* \textYinYang -> \Yingyang (marvosym)
18633 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
18634 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
18635 %* \textfrownie -> \Frowny (marvosym)
18636 % U+263A WHITE SMILING FACE; \smiley (wasysym)
18637 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
18638 %* \textsmiley -> \Smiley (marvosym)
18639 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
18640 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
18641 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
18642 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
18643 %* \textsun -> \Sun (marvosym)
18644 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
18645 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
18646 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
18647 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
18648 % U+263F MERCURY; \mercury (wasysym)
18649 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
18650 %* \textmercury -> \Mercury (marvosym)
18651 % U+2640 FEMALE SIGN; female; \female (wasysym)
18652 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
18653 %* \textPUfemale -> \textfemale (tipx)
18654 %* \textPUfemale -> \female (wasysym)
18655 %* \textPUfemale -> \venus (wasysym)
18656 %* \textPUfemale -> \Venus (marvosym)
18657 %* \textPUfemale -> \Female (marvosym)
18658 % U+2641 EARTH; \earth (wasysym)
18659 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
18660 %* \textearth -> \Earth (marvosym)

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18661 % U+2642 MALE SIGN; male, mars; \male (wasysym)
18662 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
18663 %* \textmale -> \mars (wasysym)
18664 %* \textmale -> \Mars (marvosym)
18665 %* \textmale -> \Male (marvosym)
18666 % U+2643 JUPITER; \jupiter (wasysym)
18667 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
18668 %* \textjupiter -> \Jupiter (marvosym)
18669 % U+2644 SATURN; \saturn (wasysym)
18670 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
18671 %* \textsaturn -> \Saturn (marvosym)
18672 % U+2645 URANUS; \uranus (wasysym)
18673 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
18674 %* \texturanus -> \Uranus (marvosym)
18675 % U+2646 NEPTUNE; \neptune (wasysym)
18676 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
18677 %* \textneptune -> \Neptune (marvosym)
18678 % U+2647 PLUTO; \pluto (wasysym)
18679 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
18680 %* \textpluto -> \Pluto (marvosym)
18681 % U+2648 ARIES; \aries (wasysym)
18682 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
18683 %* \textaries -> \Aries (marvosym)
18684 % U+2649 TAURUS; \taurus (wasysym)
18685 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
18686 %* \texttaurus -> \Taurus (marvosym)
18687 % U+264A GEMINI; \gemini (wasysym)
18688 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
18689 %* \textgemini -> \Gemini (marvosym)
18690 % U+264B CANCER; \cancer (wasysym)
18691 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
18692 %* \textcancer -> \Cancer (marvosym)
18693 % U+264C LEO; \leo (wasysym)
18694 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
18695 %* \textleo -> \Leo (marvosym)
18696 % U+264D VIRGO; \virgo (wasysym)
18697 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
18698 %* \textvirgo -> \Virgo (marvosym)
18699 % U+264E LIBRA; \libra (wasysym)
18700 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
18701 %* \textlibra -> \Libra (marvosym)
18702 % U+264F SCORPIO; \scorpio (wasysym)
18703 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
18704 %* \textscorpio -> \Scorpio (marvosym)
18705 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
18706 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
18707 %* \textsagittarius -> \Sagittarius (marvosym)
18708 % U+2651 CAPRICORN; \capricornus (wasysym)
18709 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
18710 %* \textcapricornus -> \Capricorn (marvosym)
18711 % U+2652 AQUARIUS; \aquarius (wasysym)
18712 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
18713 %* \textaquarius -> \Aquarius (marvosym)
18714 % U+2653 PISCES; \pisces (wasysym)

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18715 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
18716 %* \textpisces -> \Pisces (marvosym)
18717 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
18718 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
18719 %* \textspadesuitblack -> \spadesuit (MnSymbol)
18720 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
18721 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
18722 %* \textheartsuitwhite -> \Heart (marvosym)
18723 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
18724 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
18725 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
18726 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
18727 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
18728 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
18729 %* \textclubsuitblack -> \clubsuit (MnSymbol)
18730 % U+2664 WHITE SPADE SUIT; spadesuitwhite
18731 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
18732 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
18733 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
18734 % U+2666 BLACK DIAMOND SUIT; diamond
18735 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
18736 % U+2667 WHITE CLUB SUIT; clubsuitwhite
18737 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
18738 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
18739 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
18740 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
18741 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
18742 %* \textmusicalnote -> \eighthnote (wasysym, arev)
18743 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
18744 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
18745 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
      note (arev)
18746 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
18747 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
18748 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
18749 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
18750 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
18751 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
18752 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
18753 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
18754 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
18755 %* \textrecycle -> \Recycling (marvosym)
18756 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
18757 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
18758 % U+2691 BLACK FLAG; \Flag (ifsym)
18759 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
18760 %* \textFlag -> \VarFlag (ifsym)
18761 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
18762 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
18763 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
18764 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
18765 %* \textdsmilitary -> \textxswup (fourier)
18766 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
18767 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695

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18768 % U+2696 SCALES; \dsjuridical (dictsym)
 18769 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
 18770 % U+2697 ALEMBIC; \dschemical (dictsym)
 18771 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 18772 % U+2698 FLOWER; \dsbiological (dictsym)
 18773 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 18774 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 18775 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 18776 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 18777 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 18778 % U+26A0 WARNING SIGN; \danger (fourier)
 18779 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 18780 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 18781 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 18782 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 18783 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 18784 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 18785 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 18786 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 18787 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 18788 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 18789 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 18790 % U+26AD MARRIAGE SYMBOL
 18791 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 18792 % U+26AE DIVORCE SYMBOL
 18793 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 18794 % U+26B2 NEUTER; \textuncrfemale (tipx)
 18795 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 18796 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 18797 % U+26B9 SEXTILE; \hexstar (wasysym)
 18798 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 18799 % U+26BD SOCCER BALL; \Football (marvosym)
 18800 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 18801 %* \textSoccerBall -> \Football (marvosym)
 18802 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 18803 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 18804 % U+26C6 RAIN; \Rain (ifsym)
 18805 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 18806 % U+26D4 NO ENTRY; \noway (fourier)
 18807 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 18808 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 18809 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 18810 % U+26FA TENT; \Tent (ifsym)
 18811 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

46.2.30 Dingbats: U+2700 to U+27BF

18812 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbding)
 18813 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 18814 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 18815 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 18816 % U+2702 BLACK SCISSORS; \ScissorRight (bbding)
 18817 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 18818 %* \textScissorRight -> \RightScissors (marvosym)

18819 %* \textScissorRight -> \Leftscissors (marvosym)
 18820 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
 18821 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 18822 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 18823 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 18824 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 18825 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 18826 % U+2707 TAPE DRIVE; \Tape (bding)
 18827 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 18828 % U+2708 AIRPLANE; \Plane (bding)
 18829 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 18830 % U+2709 ENVELOPE; \Envelope (bding),
 18831 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 18832 %* \textEnvelope -> \Letter (marvosym)
 18833 % U+270C VICTORY HAND; \Peace (bding)
 18834 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 18835 % U+270D WRITING HAND; \WritingHand (marvosym)
 18836 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 18837 %* \textWritingHand -> \Writinghand (marvosym)
 18838 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 18839 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 18840 % U+270F PENCIL; \PencilRight (bding)
 18841 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 18842 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 18843 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 18844 % U+2711 WHITE NIB; \NibRight (bding)
 18845 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 18846 % U+2712 BLACK NIB; \NibSolidRight (bding)
 18847 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 18848 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 18849 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 18850 %* \textCheckmark -> \checkmark (MnSymbol)
 18851 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 18852 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 18853 % U+2715 MULTIPLICATION X; \XSolid (bding)
 18854 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 18855 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 18856 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 18857 % U+2717 BALLOT X; \XSolidBrush (bding)
 18858 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 18859 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 18860 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 18861 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 18862 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 18863 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 18864 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 18865 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 18866 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 18867 % U+271D LATIN CROSS; \Cross (bding)
 18868 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 18869 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 18870 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 18871 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 18872 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F

18873 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 18874 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 18875 % U+2721 STAR OF DAVID; \DavidStar (bding)
 18876 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 18877 %* \textDavidStar -> \davidstar (wasysym)
 18878 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 18879 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 18880 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 18881 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 18882 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 18883 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 18884 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 18885 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 18886 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 18887 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 18888 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 18889 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 18890 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 18891 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 18892 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 18893 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 18894 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 18895 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 18896 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 18897 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 18898 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 18899 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 18900 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 18901 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 18902 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 18903 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 18904 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 18905 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 18906 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 18907 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 18908 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 18909 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 18910 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 18911 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 18912 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 18913 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 18914 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 18915 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 18916 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 18917 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 18918 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 18919 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 18920 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 18921 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 18922 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)

18923 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
18924 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
18925 % \SixFlowerOpenCenter (bding)
18926 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
18927 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
18928 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
18929 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAl-
ternate (bding)
18930 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
18931 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
18932 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
18933 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
18934 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
18935 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlow-
erPetal (bding)
18936 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
18937 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \Sunshi-
neOpenCircled (bding)
18938 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
18939 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlow-
erAltPetal (bding)
18940 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
18941 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
18942 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
18943 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
18944 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
18945 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
18946 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
18947 % U+2747 SPARKLE; \Sparkle (bding)
18948 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
18949 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
18950 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
18951 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
18952 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
18953 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
18954 % \EightFlowerPetalRemoved (bding)
18955 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
18956 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
18957 % \EightAsterisk (bding)
18958 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
18959 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
18960 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
18961 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
18962 % \SquareShadowBottomRight (bding)
18963 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
18964 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
18965 % \SquareShadowTopRight (bding)
18966 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
18967 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
18968 % \SquareCastShadowBottomRight (bding)
18969 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
18970 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
18971 % \SquareCastShadowTopRight (bding)
18972 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752

18973 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (b-bding)
18974 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
18975 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (b-bding)
18976 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
18977 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (b-bding)
18978 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
18979 % U+275A HEAVY VERTICAL BAR; \RectangleBold (b-bding)
18980 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

46.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

18981 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
18982 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
18983 % \notperp (mathabx)
18984 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
18985 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
18986 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
18987 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
18988 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
18989 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
18990 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
18991 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
18992 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
18993 %* \textlbrackdbl -> \llbracket (stmaryrd)
18994 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
18995 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
18996 %* \textrbrackdbl -> \rrbracket (stmaryrd)

46.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

18997 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
18998 % \circlearrowleft (AmS)
18999 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
19000 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
19001 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
19002 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
19003 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
19004 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
19005 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
19006 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
19007 \DeclareTextCommand{\textlonglefttrightarrow}{PU}{\9047\367}%* U+27F7
19008 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
19009 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
19010 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
19011 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
19012 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
19013 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
19014 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
19015 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
19016 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmapsfrom (stmaryrd)
19017 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
19018 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmapsto (stmaryrd)
19019 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

46.2.33 Supplemental Arrows-B: U+2900 to U+297F

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19020 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
      bol)
19021 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
19022 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
      bol)
19023 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
19024 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
19025 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
19026 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
19027 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
19028 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
19029 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
19030 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
19031 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
19032 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
19033 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
19034 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
19035 % \rcurvearrowne (MnSymbol)
19036 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
19037 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
      WARDS;
19038 % \lcurvearrowse (MnSymbol)
19039 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
19040 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
      WARDS;
19041 % \lcurvearrowsw (MnSymbol)
19042 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
19043 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
      WARDS;
19044 % \rcurvearrowse (MnSymbol)
19045 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
19046 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
      Symbol)
19047 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
19048 %* \textlcurvearrowdown -> \RightTorque (marvosym)
19049 %* \textlcurvearrowdown -> \Righttorque (marvosym)
19050 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
19051 % \rcurvearrowdown (MnSymbol)
19052 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
19053 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
19054 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
19055 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
      bol)
19056 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
19057 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19058 % \rcurvearrowright (MnSymbol)
19059 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
19060 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
      poon (mathabx)
19061 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
19062 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
      poon (mathabx)

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19063 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 19064 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 19065 % \updownharpoonrightleft (MnSymbol)
 19066 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 19067 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 19068 % \updownharpoonleftright (MnSymbol)
 19069 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 19070 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 19071 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 19072 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 19073 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 19074 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 19075 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 19076 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 19077 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 19078 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 19079 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19080 % WITH BARB RIGHT; \downdownharpoons (mathabx)
 19081 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
 19082 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 19083 % \leftbarharpoon (mathabx)
 19084 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 19085 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 19086 % LONG DASH; \barleftharpoon (mathabx)
 19087 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 19088 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 19089 % LONG DASH; \rightbarharpoon (mathabx)
 19090 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 19091 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 19092 % LONG DASH; \barrightharpoon (mathabx)
 19093 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 19094 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19095 % WITH BARB RIGHT; \updownharpoons (mathabx)
 19096 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 19097 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 19098 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19099 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19100 % U+297F DOWN FISH TAIL
 19101 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

46.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19102 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 19103 \DeclareTextCommand{\textlparenthesis}{PU}{\9051\207}%* U+2987
 19104 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19105 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19106 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19107 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19108 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19109 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19110 %* \textobar -> \textvarobar (stmaryrd)

```

19111 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
19112 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
19113 %* \textobslash -> \circledbslash (txfonts/pxfonts)
19114 %* \textobslash -> \obackslash (mathabx)
19115 %* \textobslash -> \varobslash (stmaryrd)
19116 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
19117 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
19118 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
19119 %* \textobot -> \odplus (ulsy)
19120 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
      vosym)
19121 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
19122 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
19123 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
19124 %* \textolessthan -> \varolessthan (stmaryrd)
19125 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
19126 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
19127 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
19128 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
19129 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
19130 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
19131 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
19132 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
19133 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
19134 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
19135 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
19136 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
19137 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
19138 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
19139 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
19140 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
19141 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
19142 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
19143 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

```

46.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

```

19144 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
19145 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
19146 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
19147 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
19148 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
19149 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
19150 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
19151 % pxfonts, wasysym)
19152 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
19153 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
19154 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
19155 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
19156 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
19157 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
19158 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
19159 %* \textminusdot -> \divdot (mathabx)
19160 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
19161 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30

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19162 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
19163 % \dtimes (mathdesign)
19164 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
19165 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
19166 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
19167 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
19168 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
19169 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
19170 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
19171 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
19172 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
19173 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
19174 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
19175 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
19176 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
19177 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
19178 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
19179 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
19180 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
19181 %* \textdoublevee -> \merge (stmaryrd)
19182 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
19183 % \doublebarwedge (AmS)
19184 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19185 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19186 % \veedoublebar (mahtabx)
19187 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19188 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19189 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19190 % \neqdot (MnSymbol)
19191 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19192 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19193 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19194 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19195 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
19196 % \nleqslant (txfonts/pxfonts)
19197 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19198 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
19199 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19200 % \ngeqslant (txfonts/pxfonts)
19201 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
19202 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
19203 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
19204 % \nlessapprox (txfonts/pxfonts)
19205 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
19206 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
19207 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
19208 % \ngtrapprox (txfonts/pxfonts)
19209 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
19210 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
19211 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
19212 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
19213 % \gneq (AmS)
19214 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
19215 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)

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19216 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 19217 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 19218 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 19219 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 THAN;
 19220 % \lesseqqgtr (AmS)
 19221 \DeclareTextCommand{\textlesseqqgtr}{PU}{\9052\213}%* U+2A8B
 19222 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 THAN;
 19223 % \gtreqqless (AmS)
 19224 \DeclareTextCommand{\textgtreqqless}{PU}{\9052\214}%* U+2A8C
 19225 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 19226 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 19227 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 19228 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 19229 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 19230 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 19231 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 19232 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 19233 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 Symbol)
 19234 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 19235 % \npreceq (txfonts/pxfonts)
 19236 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 19237 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 Symbol)
 19238 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 19239 % \nsucceq (txfonts/pxfonts)
 19240 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 19241 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 19242 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 19243 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 19244 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 19245 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 19246 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 19247 % \npreceqq (txfonts/pxfonts)
 19248 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 19249 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 19250 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 19251 % \nsucceqq (txfonts/pxfonts)
 19252 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 19253 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 19254 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 19255 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 19256 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 19257 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 19258 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 19259 % \nprecapprox (txfonts/pxfonts)
 19260 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 19261 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 19262 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 19263 % \nsuccapprox (txfonts/pxfonts)

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19264 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
19265 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
      prox (AmS)
19266 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
19267 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
      prox (AmS)
19268 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\272}%* U+2ABA
19269 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
19270 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
19271 % \nsubseteqq (txfonts/pxfonts, mathabx)
19272 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
19273 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
19274 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
19275 % \nsupseteqq (mathabx)
19276 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
19277 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
19278 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
19279 %* \textdashV -> \leftVdash (MnSymbol)
19280 % \ndashV (mathabx)
19281 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
19282 %* \textndashV -> \nleftVdash (MnSymbol)
19283 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
19284 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
19285 %* \textDashv -> \leftmodels (MnSymbol)
19286 % \nDashv (mathabx)
19287 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
19288 %* \textnDashv -> \nleftmodels (MnSymbol)
19289 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
19290 % \DashV (mathabx)
19291 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
19292 %* \textDashV -> \leftModels (MnSymbol)
19293 % \nDashV (mathabx)
19294 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
19295 %* \textnDashV -> \nleftModels (MnSymbol)
19296 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
19297 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
19298 % \ndownmodels (MnSymbol)
19299 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
19300 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
19301 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
19302 % \nupmodels (MnSymbol)
19303 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
19304 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
19305 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
19306 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
19307 % \interleave (stmaryrd)
19308 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
19309 % U+2AFD DOUBLE SOLIDUS OPERATOR; \slash (stmaryrd)
19310 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
19311 %* \textsslash -> \varparallel (txfonts\pxfonts)

```

46.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

```

19312 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
19313 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20

```

19314 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 19315 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

46.2.37 Latin Extended-C: U+2C60 to U+2C7F

19316 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 19317 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

46.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

19318 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 19319 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 19320 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 19321 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 19322 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 19323 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

46.2.39 Modifier Tone Letters: U+A700 to U+A71F

19324 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 19325 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 19326 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 19327 % \textdownstep (tipa)
 19328 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

46.2.40 Latin Extended-D: U+A720 to U+A7FF

19329 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 19330 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 19331 %* \textPUheng -> \textheng (tipx)
 19332 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 19333 \DeclareTextCommand{\textPUIhookfour}{PU}{\9247\054}% U+A72C
 19334 %* \textPUIhookfour -> \textlhookfour (tipx)
 19335 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 19336 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 19337 %* \textPUscf -> \textscf (tipx)
 19338 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
 19339 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 19340 %* \textPUaolig -> \textao lig (tipx)
 19341 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 19342 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 19343 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 19344 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

46.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

19345 % U+FB01 LATIN SMALL LIGATURE FI; fi
 19346 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 19347 % U+FB02 LATIN SMALL LIGATURE FL; fl
 19348 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

46.2.42 Musical Symbols: U+1D100 to U+1D1FF

19349 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 19350 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 19351 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 19352 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 19353 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 19354 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 19355 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)

19356 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 19357 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 19358 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 19359 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 19360 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 19361 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 19362 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 19363 %* \textfullnote -> \Ganz (harmony)
 19364 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 19365 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 19366 %* \texthalfnote -> \Halb (harmony)
 19367 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 19368 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 19369 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 19370 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 19371 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 19372 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 19373 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 19374 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

46.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

19375 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 19376 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 19377 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 19378 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 19379 % U+1F468 MAN; \ManFace (marvosym)
 19380 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 19381 % U+1F469 WOMAN; \WomanFace (marvosym)
 19382 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 19383 %* \textWomanFace -> \Womanface (marvosym)
 19384 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 19385 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 19386 %* \textFax -> \Faxmachine (marvosym)
 19387 % U+1F525 FIRE; \Fire (ifsym)
 19388 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

46.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

19389 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 19390 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 19391 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 19392 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 19393 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 19394 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

46.2.45 Miscellaneous

19395 \DeclareTextCommand{\SS}{PU}{SS}%
 19396 % \textcopyleft (textcomp)
 19397 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 19398 % \ccnc (ccllicenses)
 19399 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 19400 % \ccnd (ccllicenses)
 19401 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
 19402 % \ccsa (ccllicenses)
 19403 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD

```

19404 % \Info (marvosym, china2e)
19405 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
19406 % \CESign (marvosym)
19407 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
19408 %* \textCESign -> \CESign (marvosym)

```

46.2.46 Aliases

Aliases (german.sty)

```

19409 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
19410 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
19411 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
19412 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
19413 \DeclareTextCommand{\textflqq}{PU}{\guillemetleft}%
19414 \DeclareTextCommand{\textfrqq}{PU}{\guillemetright}%
19415 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
19416 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

19417 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
19418 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
19419 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
19420 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
19421 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
19422 </puenc>

```

46.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

19423 <*puvnenc>
19424 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
19425 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
19426 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
19427 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
19428 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
19429 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
19430 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
19431 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
19432 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
19433 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
19434 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
19435 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
19436 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
19437 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
19438 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
19439 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
19440 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
19441 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
19442 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
19443 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
19444 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
19445 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
19446 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5

```

19447 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 19448 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 19449 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 19450 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 19451 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 19452 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 19453 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 19454 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 19455 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 19456 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 19457 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 19458 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 19459 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 19460 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 19461 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 19462 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 19463 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 19464 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 19465 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 19466 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 19467 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 19468 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 19469 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 19470 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 19471 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 19472 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 19473 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 19474 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 19475 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 19476 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 19477 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 19478 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 19479 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 19480 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 19481 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 19482 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 19483 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 19484 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 19485 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 19486 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 19487 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 19488 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 19489 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 19490 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 19491 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 19492 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 19493 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 19494 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 19495 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 19496 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 19497 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 19498 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 19499 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 19500 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3

19501 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
19502 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
19503 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
19504 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
19505 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
19506 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
19507 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
19508 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
19509 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
19510 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
19511 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
19512 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
19513 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
19514 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
19515 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EB C
19516 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
19517 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
19518 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
19519 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
19520 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
19521 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
19522 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
19523 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
19524 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
19525 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
19526 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
19527 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
19528 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
19529 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
19530 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
19531 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
19532 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
19533 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
19534 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
19535 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
19536 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
19537 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
19538 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
19539 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
19540 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
19541 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
19542 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
19543 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
19544 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
19545 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
19546 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
19547 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
19548 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
19549 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
19550 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
19551 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
19552 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
19553 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
19554 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6

```

19555 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
19556 </puvnenc>

```

46.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

19557 <*puarenc>

19558 % U+0621;afii57409;ARABIC LETTER HAMZA
19559 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
19560 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
19561 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
19562 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
19563 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
19564 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
19565 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
19566 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
19567 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
19568 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
19569 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
19570 % U+0627;afii57415;ARABIC LETTER ALEF
19571 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
19572 % U+0628;afii57416;ARABIC LETTER BEH
19573 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
19574 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
19575 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
19576 % U+062A;afii57418;ARABIC LETTER TEH
19577 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
19578 % U+062B;afii57419;ARABIC LETTER THEH
19579 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
19580 % U+062C;afii57420;ARABIC LETTER JEEM
19581 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
19582 % U+062D;afii57421;ARABIC LETTER HAH
19583 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
19584 % U+062E;afii57422;ARABIC LETTER KHAH
19585 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
19586 % U+062F;afii57423;ARABIC LETTER DAL
19587 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
19588 % U+0630;afii57424;ARABIC LETTER THAL
19589 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
19590 % U+0631;afii57425;ARABIC LETTER REH
19591 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
19592 % U+0632;afii57426;ARABIC LETTER ZAIN
19593 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
19594 % U+0633;afii57427;ARABIC LETTER SEEN
19595 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
19596 % U+0634;afii57428;ARABIC LETTER SHEEN
19597 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
19598 % U+0635;afii57429;ARABIC LETTER SAD
19599 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
19600 % U+0636;afii57430;ARABIC LETTER DAD
19601 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
19602 % U+0637;afii57431;ARABIC LETTER TAH
19603 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637

```


19604 % U+0638;afii57432;ARABIC LETTER ZAH
 19605 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 19606 % U+0639;afii57433;ARABIC LETTER AIN
 19607 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 19608 % U+063A;afii57434;ARABIC LETTER GHAIN
 19609 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 19610 % U+0640;afii57440;ARABIC TATWEEL
 19611 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 19612 % U+0641;afii57441;ARABIC LETTER FEH
 19613 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 19614 % U+0642;afii57442;ARABIC LETTER QAF
 19615 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 19616 % U+0643;afii57443;ARABIC LETTER KAF
 19617 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 19618 % U+0644;afii57444;ARABIC LETTER LAM
 19619 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 19620 % U+0645;afii57445;ARABIC LETTER MEEM
 19621 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 19622 % U+0646;afii57446;ARABIC LETTER NOON
 19623 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 19624 % U+0647;afii57470;ARABIC LETTER HEH
 19625 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 19626 % U+0648;afii57448;ARABIC LETTER WAW
 19627 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 19628 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 19629 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 19630 % U+064A;afii57450;ARABIC LETTER YEH
 19631 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 19632 % U+064B;afii57451;ARABIC FATHATAN
 19633 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 19634 % U+064C;afii57452;ARABIC DAMMATAN
 19635 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 19636 % U+064D;afii57453;ARABIC KASRATAN
 19637 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 19638 % U+064E;afii57454;ARABIC FATHA
 19639 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 19640 % U+064F;afii57455;ARABIC DAMMA
 19641 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 19642 % U+0650;afii57456;ARABIC KASRA
 19643 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 19644 % U+0651;afii57457;ARABIC SHADDA
 19645 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 19646 % U+0652;afii57458;ARABIC SUKUN
 19647 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 19648 % U+067E ARABIC LETTER PEH; afii57506
 19649 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 19650 % U+0686 ARABIC LETTER TCHEH; afii57507
 19651 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 19652 % U+0698 ARABIC LETTER JEH; afii57508
 19653 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 19654 % U+06A9 ARABIC LETTER KEHEH
 19655 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9

19656 % U+06AF ARABIC LETTER GAF; afi57509
 19657 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 19658 % U+06CC ARABIC LETTER FARSI YEH
 19659 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 19660 % U+200C ZERO WIDTH NON-JOINER; afi61664
 19661 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 19662 % U+200D ZERO WIDTH JOINER; afi301
 19663 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

 19664 (/puarenc)

 19665 (*psdextra)
 19666 \Hy@VersionCheck{psdextra.def}
 19667 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
 19668 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
 19669 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
 19670 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
 19671 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
 19672 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
 19673 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
 19674 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
 19675 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
 19676 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
 19677 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
 19678 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
 19679 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
 19680 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
 19681 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
 19682 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
 19683 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
 19684 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
 19685 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
 19686 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
 19687 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
 19688 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
 19689 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
 19690 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
 19691 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
 19692 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
 19693 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
 19694 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
 19695 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
 19696 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
 19697 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
 19698 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
 19699 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
 19700 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
 19701 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
 19702 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
 19703 \newcommand*{\psdmapshortnames}{%
 19704 \let\MVPlus\textMVPlus
 19705 \let\MVComma\textMVComma
 19706 \let\MVMinus\textMVMinus
 19707 \let\MVPeriod\textMVPeriod
 19708 \let\MVDivision\textMVDivision

19709 \let\MVZero\textMVZero
 19710 \let\MVOne\textMVOne
 19711 \let\MVTwo\textMVTwo
 19712 \let\MVThree\textMVThree
 19713 \let\MVFour\textMVFour
 19714 \let\MVFive\textMVFive
 19715 \let\MVSix\textMVSix
 19716 \let\MVSeven\textMVSeven
 19717 \let\MVEight\textMVEight
 19718 \let\MVNine\textMVNine
 19719 \let\MVAt\textMVAt
 19720 \let\copyright\textcopyright
 19721 \let\twosuperior\texttwosuperior
 19722 \let\threesuperior\textthreesuperior
 19723 \let\onesuperior\textonesuperior
 19724 \let\Thorn\textThorn
 19725 \let\thorn\textthorn
 19726 \let\hbar\texthbar
 19727 \let\hausA\texthausA
 19728 \let\hausD\texthausD
 19729 \let\hausK\texthausK
 19730 \let\barl\textbarl
 19731 \let\inve\textinve
 19732 \let\slashc\textslashc
 19733 \let\scripta\textscripta
 19734 \let\openo\textopeno
 19735 \let\rtaild\textrtaild
 19736 \let\reve\textreve
 19737 \let\schwa\textschwa
 19738 \let\niepsilon\textniepsilon
 19739 \let\repsilon\textrepsilon
 19740 \let\rhookrepsilon\texthookrepsilon
 19741 \let\scriptg\textscriptg
 19742 \let\scg\textscg
 19743 \let\ipagamma\textipagamma
 19744 \let\babygamma\textbabygamma
 19745 \let\bari\textbari
 19746 \let\niiota\textniiota
 19747 \let\sci\textsci
 19748 \let\scn\textscn
 19749 \let\niphi\textniphi
 19750 \let\longlegr\textlonglegr
 19751 \let\scr\textscr
 19752 \let\invscr\textinvscr
 19753 \let\esh\textesh
 19754 \let\baru\textbaru
 19755 \let\niupsilon\textniupsilon
 19756 \let\scriptv\textscriptv
 19757 \let\turnv\textturnv
 19758 \let\turnw\textturnw
 19759 \let\turny\textturny
 19760 \let\scy\textscy
 19761 \let\yogh\textyogh
 19762 \let\glotstop\textglotstop

19763 \let\revglotstop\textrevglotstop
 19764 \let\invglotstop\textinvglotstop
 19765 \let\Gamma\textGamma
 19766 \let\Delta\textDelta
 19767 \let\Theta\textTheta
 19768 \let\Lambda\textLambda
 19769 \let\Xi\textXi
 19770 \let\Pi\textPi
 19771 \let\Sigma\textSigma
 19772 \let\Upsilon\textUpsilon
 19773 \let\Phi\textPhi
 19774 \let\Psi\textPsi
 19775 \let\Omega\textOmega
 19776 \let\alpha\textalpha
 19777 \let\beta\textbeta
 19778 \let\gamma\textgamma
 19779 \let\delta\textdelta
 19780 \let\epsilon\textepsilon
 19781 \let\zeta\textzeta
 19782 \let\eta\texteta
 19783 \let\theta\texttheta
 19784 \let\iota\textiota
 19785 \let\kappa\textkappa
 19786 \let\lambda\textlambda
 19787 \let\mu\textmu
 19788 \let\mugreek\textmugreek
 19789 \let\nu\textnu
 19790 \let\xi\textxi
 19791 \let\pi\textpi
 19792 \let\rho\rho
 19793 \let\varsigma\textvarsigma
 19794 \let\sigma\textsigma
 19795 \let\tau\texttau
 19796 \let\upsilon\textupsilon
 19797 \let\phi\textphi
 19798 \let\chi\textchi
 19799 \let\psi\textpsi
 19800 \let\omega\textomega
 19801 \let\scd\textscd
 19802 \let\scu\textscu
 19803 \let\iinferior\textiinferior
 19804 \let\rinferior\extrinferior
 19805 \let\uinferior\textuinferior
 19806 \let\vinferior\textvinferior
 19807 \let\betainferior\textbetainferior
 19808 \let\gammainferior\textgammainferior
 19809 \let\rhoinferior\textrhoinferior
 19810 \let\phiinferior\textphiinferior
 19811 \let\chiinferior\textchiinferior
 19812 \let\barsci\textbarsci
 19813 \let\barp\textbarp
 19814 \let\barscu\textbarscu
 19815 \let\htrtaild\texthtrtaild
 19816 \let\dagger\textdagger

19817 $\backslash\text{let}\backslash\text{bullet}\backslash\text{textbullet}$
 19818 $\backslash\text{let}\backslash\text{hdotfor}\backslash\text{texthdotfor}$
 19819 $\backslash\text{let}\backslash\text{prime}\backslash\text{textprime}$
 19820 $\backslash\text{let}\backslash\text{second}\backslash\text{textsecond}$
 19821 $\backslash\text{let}\backslash\text{third}\backslash\text{textthird}$
 19822 $\backslash\text{let}\backslash\text{backprime}\backslash\text{textbackprime}$
 19823 $\backslash\text{let}\backslash\text{lefttherefore}\backslash\text{textlefttherefore}$
 19824 $\backslash\text{let}\backslash\text{fourth}\backslash\text{textfourth}$
 19825 $\backslash\text{let}\backslash\text{diamonddots}\backslash\text{textdiamonddots}$
 19826 $\backslash\text{let}\backslash\text{zerosuperior}\backslash\text{textzerosuperior}$
 19827 $\backslash\text{let}\backslash\text{isuperior}\backslash\text{textisuperior}$
 19828 $\backslash\text{let}\backslash\text{foursuperior}\backslash\text{textfoursuperior}$
 19829 $\backslash\text{let}\backslash\text{fivesuperior}\backslash\text{textfivesuperior}$
 19830 $\backslash\text{let}\backslash\text{sixsuperior}\backslash\text{textsixsuperior}$
 19831 $\backslash\text{let}\backslash\text{sevensuperior}\backslash\text{textsevensuperior}$
 19832 $\backslash\text{let}\backslash\text{eightsuperior}\backslash\text{texteightsuperior}$
 19833 $\backslash\text{let}\backslash\text{ninesuperior}\backslash\text{textninesuperior}$
 19834 $\backslash\text{let}\backslash\text{plussuperior}\backslash\text{textplussuperior}$
 19835 $\backslash\text{let}\backslash\text{minussuperior}\backslash\text{textminussuperior}$
 19836 $\backslash\text{let}\backslash\text{equalsuperior}\backslash\text{tequalsuperior}$
 19837 $\backslash\text{let}\backslash\text{parenleftsuperior}\backslash\text{textparenleftsuperior}$
 19838 $\backslash\text{let}\backslash\text{parenrightsuperior}\backslash\text{textparenrightsuperior}$
 19839 $\backslash\text{let}\backslash\text{nsuperior}\backslash\text{textnsuperior}$
 19840 $\backslash\text{let}\backslash\text{zeroinferior}\backslash\text{textzeroinferior}$
 19841 $\backslash\text{let}\backslash\text{oneinferior}\backslash\text{textoneinferior}$
 19842 $\backslash\text{let}\backslash\text{twoinferior}\backslash\text{texttwoinferior}$
 19843 $\backslash\text{let}\backslash\text{threeinferior}\backslash\text{textthreeinferior}$
 19844 $\backslash\text{let}\backslash\text{fourinferior}\backslash\text{textfourinferior}$
 19845 $\backslash\text{let}\backslash\text{fiveinferior}\backslash\text{textfiveinferior}$
 19846 $\backslash\text{let}\backslash\text{sixinferior}\backslash\text{textsixinferior}$
 19847 $\backslash\text{let}\backslash\text{seveninferior}\backslash\text{textseveninferior}$
 19848 $\backslash\text{let}\backslash\text{eightinferior}\backslash\text{teightinferior}$
 19849 $\backslash\text{let}\backslash\text{nineinferior}\backslash\text{textnineinferior}$
 19850 $\backslash\text{let}\backslash\text{plusinferior}\backslash\text{textplusinferior}$
 19851 $\backslash\text{let}\backslash\text{minusinferior}\backslash\text{textminusinferior}$
 19852 $\backslash\text{let}\backslash\text{equalsinferior}\backslash\text{tequalsinferior}$
 19853 $\backslash\text{let}\backslash\text{parenleftinferior}\backslash\text{textparenleftinferior}$
 19854 $\backslash\text{let}\backslash\text{parenrightinferior}\backslash\text{textparenrightinferior}$
 19855 $\backslash\text{let}\backslash\text{ainferior}\backslash\text{textainferior}$
 19856 $\backslash\text{let}\backslash\text{einferior}\backslash\text{texteinferior}$
 19857 $\backslash\text{let}\backslash\text{oinferior}\backslash\text{textoinferior}$
 19858 $\backslash\text{let}\backslash\text{xinferior}\backslash\text{textxinferior}$
 19859 $\backslash\text{let}\backslash\text{schwainferior}\backslash\text{textschwainferior}$
 19860 $\backslash\text{let}\backslash\text{hinferior}\backslash\text{texthinferior}$
 19861 $\backslash\text{let}\backslash\text{kinferior}\backslash\text{textkinferior}$
 19862 $\backslash\text{let}\backslash\text{linferior}\backslash\text{textlinferior}$
 19863 $\backslash\text{let}\backslash\text{mininferior}\backslash\text{textmininferior}$
 19864 $\backslash\text{let}\backslash\text{ninferior}\backslash\text{textninferior}$
 19865 $\backslash\text{let}\backslash\text{pinferior}\backslash\text{textpinferior}$
 19866 $\backslash\text{let}\backslash\text{sinferior}\backslash\text{textsinferior}$
 19867 $\backslash\text{let}\backslash\text{tinferior}\backslash\text{texttinferior}$
 19868 $\backslash\text{let}\backslash\text{Deleatur}\backslash\text{textDeleatur}$
 19869 $\backslash\text{let}\backslash\text{hslash}\backslash\text{texthslash}$
 19870 $\backslash\text{let}\backslash\text{Im}\backslash\text{textIm}$

19871 \let\ell\textell
 19872 \let\wp\textwp
 19873 \let\Re\textRe
 19874 \let\mho\textmho
 19875 \let\riota\textriota
 19876 \let\Finv\textFinv
 19877 \let\aleph\textaleph
 19878 \let\beth\textbeth
 19879 \let\gimel\textgimel
 19880 \let\daleth\textdaleth
 19881 \let\xfax\textfax
 19882 \let\Game\textGame
 19883 \let\leftarrow\textleftarrow
 19884 \let\uparrow\textuparrow
 19885 \let\rightarrow\textrightarrow
 19886 \let\downarrow\textdownarrow
 19887 \let\leftrightarrow\textleftrightarrow
 19888 \let\updownarrow\textupdownarrow
 19889 \let\nwarrow\textnwarrow
 19890 \let\nearrow\textnearrow
 19891 \let\searrow\textsearrow
 19892 \let\swarrow\textswarrow
 19893 \let\nleftarrow\textnleftarrow
 19894 \let\nrightarrow\textnrightarrow
 19895 \let\twoheadleftarrow\texttwoheadleftarrow
 19896 \let\ntwoheadleftarrow\textntwoheadleftarrow
 19897 \let\twoheaduparrow\texttwoheaduparrow
 19898 \let\twoheadrightarrow\texttwoheadrightarrow
 19899 \let\ntwoheadrightarrow\textntwoheadrightarrow
 19900 \let\twoheaddownarrow\texttwoheaddownarrow
 19901 \let\leftarrowtail\textleftarrowtail
 19902 \let\rightarrowtail\textrightarrowtail
 19903 \let\mapsto\textmapsto
 19904 \let\hookleftarrow\texthookleftarrow
 19905 \let\hookrightarrow\texthookrightarrow
 19906 \let\looparrowleft\textlooparrowleft
 19907 \let\looparrowright\textlooparrowright
 19908 \let\leftrightharpoonup\textleftrightharpoonup
 19909 \let\lightning\textlightning
 19910 \let\dlsh\textdlsh
 19911 \let\curvearrowleft\textcurvearrowleft
 19912 \let\curvearrowright\textcurvearrowright
 19913 \let\leftharpoonup\textleftharpoonup
 19914 \let\leftharpoondown\textleftharpoondown
 19915 \let\upharpoonright\textupharpoonright
 19916 \let\upharpoonleft\textupharpoonleft
 19917 \let\rightharpoonup\text\rightharpoonup
 19918 \let\rightharpoondown\text\rightharpoondown
 19919 \let\downharpoonright\textdownharpoonright
 19920 \let\downharpoonleft\textdownharpoonleft
 19921 \let\rightleftarrows\textrightleftarrows
 19922 \let\updownarrows\textupdownarrows
 19923 \let\leftrightarrows\textleftrightarrows
 19924 \let\leftleftarrows\textleftleftarrows

19925 $\backslash\mathrm{upuparrows}$ $\backslash\mathrm{textupuparrows}$
19926 $\backslash\mathrm{rightrightarrows}$ $\backslash\mathrm{textrightrightarrows}$
19927 $\backslash\mathrm{downdownarrows}$ $\backslash\mathrm{textdowndownarrows}$
19928 $\backslash\mathrm{leftrightharpoons}$ $\backslash\mathrm{textleftrightharpoons}$
19929 $\backslash\mathrm{rightleftharpoons}$ $\backslash\mathrm{textrightleftharpoons}$
19930 $\backslash\mathrm{nLeftarrow}$ $\backslash\mathrm{textnLeftarrow}$
19931 $\backslash\mathrm{nLeftrightarrow}$ $\backslash\mathrm{textnLeftrightarrow}$
19932 $\backslash\mathrm{nRrightarrow}$ $\backslash\mathrm{textnRrightarrow}$
19933 $\backslash\mathrm{Leftarrow}$ $\backslash\mathrm{textLeftarrow}$
19934 $\backslash\mathrm{Uparrow}$ $\backslash\mathrm{textUparrow}$
19935 $\backslash\mathrm{Rrightarrow}$ $\backslash\mathrm{textRrightarrow}$
19936 $\backslash\mathrm{Downarrow}$ $\backslash\mathrm{textDownarrow}$
19937 $\backslash\mathrm{Leftrightarrow}$ $\backslash\mathrm{textLeftrightarrow}$
19938 $\backslash\mathrm{Updownarrow}$ $\backslash\mathrm{textUpdownarrow}$
19939 $\backslash\mathrm{Narrow}$ $\backslash\mathrm{textNarrow}$
19940 $\backslash\mathrm{Nearrow}$ $\backslash\mathrm{textNearrow}$
19941 $\backslash\mathrm{Searrow}$ $\backslash\mathrm{textSearrow}$
19942 $\backslash\mathrm{Swarrow}$ $\backslash\mathrm{textSwarrow}$
19943 $\backslash\mathrm{Lleftarrow}$ $\backslash\mathrm{textLleftarrow}$
19944 $\backslash\mathrm{Rrightarrow}$ $\backslash\mathrm{textRrightarrow}$
19945 $\backslash\mathrm{leftsquigarrow}$ $\backslash\mathrm{textleftsquigarrow}$
19946 $\backslash\mathrm{rightsquigarrow}$ $\backslash\mathrm{textrightsquigarrow}$
19947 $\backslash\mathrm{dashleftarrow}$ $\backslash\mathrm{texdashleftarrow}$
19948 $\backslash\mathrm{dasheduparrow}$ $\backslash\mathrm{texdasheduparrow}$
19949 $\backslash\mathrm{dashrightarrow}$ $\backslash\mathrm{texdashrightarrow}$
19950 $\backslash\mathrm{dasheddownarrow}$ $\backslash\mathrm{texdasheddownarrow}$
19951 $\backslash\mathrm{pointer}$ $\backslash\mathrm{textpointer}$
19952 $\backslash\mathrm{downuparrows}$ $\backslash\mathrm{textdownuparrows}$
19953 $\backslash\mathrm{leftarrowtriangle}$ $\backslash\mathrm{textleftarrowtriangle}$
19954 $\backslash\mathrm{rightarrowtriangle}$ $\backslash\mathrm{textrightarrowtriangle}$
19955 $\backslash\mathrm{leftrightarrowtriangle}$ $\backslash\mathrm{textleftrightarrowtriangle}$
19956 $\backslash\mathrm{forall}$ $\backslash\mathrm{textforall}$
19957 $\backslash\mathrm{complement}$ $\backslash\mathrm{textcomplement}$
19958 $\backslash\mathrm{partial}$ $\backslash\mathrm{textpartial}$
19959 $\backslash\mathrm{exists}$ $\backslash\mathrm{textexists}$
19960 $\backslash\mathrm{nexists}$ $\backslash\mathrm{textnexists}$
19961 $\backslash\mathrm{emptyset}$ $\backslash\mathrm{textemptyset}$
19962 $\backslash\mathrm{triangle}$ $\backslash\mathrm{texttriangle}$
19963 $\backslash\mathrm{nabla}$ $\backslash\mathrm{textnabla}$
19964 $\backslash\mathrm{in}$ $\backslash\mathrm{textin}$
19965 $\backslash\mathrm{notin}$ $\backslash\mathrm{textnotin}$
19966 $\backslash\mathrm{smallin}$ $\backslash\mathrm{textsmallin}$
19967 $\backslash\mathrm{ni}$ $\backslash\mathrm{textni}$
19968 $\backslash\mathrm{notowner}$ $\backslash\mathrm{textnotowner}$
19969 $\backslash\mathrm{smallowns}$ $\backslash\mathrm{textsmallowns}$
19970 $\backslash\mathrm{prod}$ $\backslash\mathrm{textprod}$
19971 $\backslash\mathrm{amalg}$ $\backslash\mathrm{textamalg}$
19972 $\backslash\mathrm{sum}$ $\backslash\mathrm{textsum}$
19973 $\backslash\mathrm{mp}$ $\backslash\mathrm{textmp}$
19974 $\backslash\mathrm{dotplus}$ $\backslash\mathrm{texdotplus}$
19975 $\backslash\mathrm{Divides}$ $\backslash\mathrm{textDivides}$
19976 $\backslash\mathrm{DividesNot}$ $\backslash\mathrm{textDividesNot}$
19977 $\backslash\mathrm{setminus}$ $\backslash\mathrm{textsetminus}$
19978 $\backslash\mathrm{ast}$ $\backslash\mathrm{textast}$

19979 `\let\circ\textcirc`
 19980 `\let\surd\textsurd`
 19981 `\let\propto\textpropto`
 19982 `\let\infty\textinfty`
 19983 `\let\angle\textangle`
 19984 `\let\measuredangle\textmeasuredangle`
 19985 `\let\sphericalangle\textsphericalangle`
 19986 `\let\mid\textmid`
 19987 `\let\nmid\textnmid`
 19988 `\let\parallel\textparallel`
 19989 `\let\nparallel\textnparallel`
 19990 `\let\wedge\textwedge`
 19991 `\let\owedge\textowedge`
 19992 `\let\vee\textvee`
 19993 `\let\ovee\textovee`
 19994 `\let\cap\textcap`
 19995 `\let\cup\textcup`
 19996 `\let\int\textint`
 19997 `\let\iint\textiint`
 19998 `\let\iiint\textiiint`
 19999 `\let\oint\textoint`
 20000 `\let\oiint\textoiint`
 20001 `\let\ointclockwise\textointclockwise`
 20002 `\let\ointctrclockwise\textointctrclockwise`
 20003 `\let\therefore\texttherefore`
 20004 `\let\because\textbecause`
 20005 `\let\vdots\textvdots`
 20006 `\let\squaredots\textsquaredots`
 20007 `\let\dotminus\textdotminus`
 20008 `\let\eqcolon\texteqcolon`
 20009 `\let\sim\textsim`
 20010 `\let\backsim\textbacksim`
 20011 `\let\nbacksim\textnbacksim`
 20012 `\let\wr\textwr`
 20013 `\let\nsim\textnsim`
 20014 `\let\eqsim\texteqsim`
 20015 `\let\neqsim\textneqsim`
 20016 `\let\simeq\textsimeq`
 20017 `\let\nsimeq\textnsimeq`
 20018 `\let\cong\textcong`
 20019 `\let\ncong\textncong`
 20020 `\let\approx\textapprox`
 20021 `\let\napprox\textnapprox`
 20022 `\let\approxeq\textapproxeq`
 20023 `\let\napproxeq\textnapproxeq`
 20024 `\let\triplesim\texttriplesim`
 20025 `\let\ntriplesim\textntriplesim`
 20026 `\let\backcong\textbackcong`
 20027 `\let\nbackcong\textnbackcong`
 20028 `\let\asympt\textasympt`
 20029 `\let\nasympt\textnasympt`
 20030 `\let\Bumpeq\textBumpeq`
 20031 `\let\NBumpeq\textNBumpeq`
 20032 `\let\bumpeq\textbumpeq`

20033 \let\nbumpeq\textnbumpeq
 20034 \let\doteq\textdoteq
 20035 \let\ndoteq\textndoteq
 20036 \let\doteqdot\textdoteqdot
 20037 \let\NDoteq\textNDoteq
 20038 \let\fallingdoteq\textfallingdoteq
 20039 \let\ngoingdoteq\textngoingdoteq
 20040 \let\risingdoteq\textrisingdoteq
 20041 \let\ngoingdoteq\textngoingdoteq
 20042 \let\colonequals\textcolonequals
 20043 \let\equalscolon\textequalscolon
 20044 \let\eqcirc\texteqcirc
 20045 \let\neqcirc\textneqcirc
 20046 \let\circeq\textcirceq
 20047 \let\ncirceq\textncirceq
 20048 \let\hateq\texthateq
 20049 \let\nhateq\textnhateq
 20050 \let\triangleeq\texttriangleeq
 20051 \let\neq\textneq
 20052 \let\ne\textne
 20053 \let\equiv\textequiv
 20054 \let\nequiv\textnequiv
 20055 \let\leq\textleq
 20056 \let\le\textle
 20057 \let\geq\textgeq
 20058 \let\ge\textge
 20059 \let\leqq\textleqq
 20060 \let\leqq\textleqq
 20061 \let\geqq\textgeqq
 20062 \let\ngqq\textngqq
 20063 \let\lneqq\textlneqq
 20064 \let\gneqq\textgneqq
 20065 \let\ll\textll
 20066 \let\nll\textnll
 20067 \let\gg\textgg
 20068 \let\ngg\textngg
 20069 \let\between\textbetween
 20070 \let\nless\textnless
 20071 \let\ngtr\textngtr
 20072 \let\nleq\textnleq
 20073 \let\ngq\textngq
 20074 \let\lesssim\textlesssim
 20075 \let\gtrsim\textgtrsim
 20076 \let\nlesssim\textnlesssim
 20077 \let\ngtrsim\textngtrsim
 20078 \let\lessgtr\textlessgtr
 20079 \let\gtrless\textgtrless
 20080 \let\ngtrless\textngtrless
 20081 \let\nlessgtr\textnlessgtr
 20082 \let\prec\textprec
 20083 \let\succ\textsucc
 20084 \let\preccurlyeq\textpreccurlyeq
 20085 \let\succcurlyeq\textsucccurlyeq
 20086 \let\prec\textprec

20087 \let\nprecsim\textnprecsim
 20088 \let\succsim\textsuccsim
 20089 \let\nsuccsim\textnsuccsim
 20090 \let\nprec\textnprec
 20091 \let\nsucc\textnsucc
 20092 \let\subset\textsubset
 20093 \let\supset\textsupset
 20094 \let\nsubset\textnsubset
 20095 \let\nsupset\textnsupset
 20096 \let\subseteq\textsubseteq
 20097 \let\supseteq\textsupseteq
 20098 \let\nsubseteq\textnsubseteq
 20099 \let\nsupseteq\textnsupseteq
 20100 \let\subsetneq\textsubsetneq
 20101 \let\supsetneq\textsupsetneq
 20102 \let\cupdot\textcupdot
 20103 \let\cupplus\textcupplus
 20104 \let\sqsubset\textsqssubset
 20105 \let\nsqsubset\textnsqsubset
 20106 \let\sqsupset\textsqsupset
 20107 \let\nsqsupset\textnsqsupset
 20108 \let\sqsubseteq\textsqssubseteq
 20109 \let\nsqsubseteq\textnsqsubseteq
 20110 \let\sqsupseteq\textsqsupseteq
 20111 \let\nsqsupseteq\textnsqsupseteq
 20112 \let\sqcap\textsqcap
 20113 \let\sqcup\textsqcup
 20114 \let\oplus\textoplus
 20115 \let\ominus\textominus
 20116 \let\otimes\textotimes
 20117 \let\oslash\textoslash
 20118 \let\odot\textodot
 20119 \let\circledcirc\textcircledcirc
 20120 \let\circledast\textcircledast
 20121 \let\circledash\textcircledash
 20122 \let\boxplus\textboxplus
 20123 \let\boxminus\textboxminus
 20124 \let\boxtimes\textboxtimes
 20125 \let\boxdot\textboxdot
 20126 \let\vdash\textvdash
 20127 \let\dashv\textdashv
 20128 \let\ndashv\textndashv
 20129 \let\top\texttop
 20130 \let\ndownvdash\textndownvdash
 20131 \let\bot\textbot
 20132 \let\nupvdash\textnupvdash
 20133 \let\vDash\textvDash
 20134 \let\Vdash\textVdash
 20135 \let\Vvdash\textVvdash
 20136 \let\NVdash\textNVdash
 20137 \let\VDash\textVDash
 20138 \let\Nvdash\textNvdash
 20139 \let\NVDash\textNVDash
 20140 \let\NVdash\textNVdash

20141 \let\nVDash\textnVDash
 20142 \let\lhd\textlhd
 20143 \let\rhd\textrhd
 20144 \let\unlhd\textunlhd
 20145 \let\unrhd\textunrhd
 20146 \let\multimapdotbothA\textmultimapdotbothA
 20147 \let\multimapdotbothB\textmultimapdotbothB
 20148 \let\multimap\textmultimap
 20149 \let\veebar\textveebar
 20150 \let\barwedge\textbarwedge
 20151 \let\star\textstar
 20152 \let\divideontimes\textdivideontimes
 20153 \let\bowtie\textbowtie
 20154 \let\ltimes\textltimes
 20155 \let\rtimes\textrtimes
 20156 \let\leftthreetimes\textleftthreetimes
 20157 \let\rightthreetimes\textrightthreetimes
 20158 \let\backsimeq\textbacksimeq
 20159 \let\nbacksimeq\textnbacksimeq
 20160 \let\curlyvee\textcurlyvee
 20161 \let\curlywedge\textcurlywedge
 20162 \let\Subset\textSubset
 20163 \let\NSubset\textNSubset
 20164 \let\Supset\textSupset
 20165 \let\NSupset\textNSupset
 20166 \let\Cap\textCap
 20167 \let\Cup\textCup
 20168 \let\pitchfork\textpitchfork
 20169 \let\lessdot\textlessdot
 20170 \let\gtrdot\textgtrdot
 20171 \let\lll\textlll
 20172 \let\ggg\textggg
 20173 \let\lesseqgtr\textlesseqgtr
 20174 \let\gtreqless\textgtreqless
 20175 \let\curlyeqprec\textcurlyeqprec
 20176 \let\ncurlyeqprec\textncurlyeqprec
 20177 \let\curlyeqsucc\textcurlyeqsucc
 20178 \let\ncurlyeqsucc\textncurlyeqsucc
 20179 \let\preccurlyeq\textnpreccurlyeq
 20180 \let\nsucccurlyeq\textnsucccurlyeq
 20181 \let\nqsubseteq\textnqsubseteq
 20182 \let\nqsupseteq\textnqsupseteq
 20183 \let\sqsubsetneq\textsqsubsetneq
 20184 \let\sqsupsetneq\textsqsupsetneq
 20185 \let\lnsim\textlnsim
 20186 \let\gnsim\textgnsim
 20187 \let\precnsim\textprecnsim
 20188 \let\succnsim\textsuccnsim
 20189 \let\ntriangleleft\textntriangleleft
 20190 \let\ntriangleright\textntriangleright
 20191 \let\ntrianglelefteq\textntrianglelefteq
 20192 \let\ntrianglerighteq\textntrianglerighteq
 20193 \let\vdots\textvdots
 20194 \let\cdots\textcdots

20195 \let\udots\textudots
 20196 \let\ddots\textddots
 20197 \let\barin\textbarin
 20198 \let\diameter\textdiameter
 20199 \let\backneg\textbackneg
 20200 \let\wasylozenge\textwasylozenge
 20201 \let\invbackneg\textinvbackneg
 20202 \let\clock\textclock
 20203 \let\ulcorner\textulcorner
 20204 \let\urcorner\texturcorner
 20205 \let\llcorner\textllcorner
 20206 \let\lrcorner\textlrcorner
 20207 \let\frown\textfrown
 20208 \let\smile\textsmile
 20209 \let\Keyboard\textKeyboard
 20210 \let\langle\textlangle
 20211 \let\rangle\textrangle
 20212 \let\APLinv\textAPLinv
 20213 \let\Tumbler\textTumbler
 20214 \let\notslash\textnotslash
 20215 \let\notbackslash\textnotbackslash
 20216 \let\boxbackslash\textboxbackslash
 20217 \let\APLleftarrowbox\textAPLleftarrowbox
 20218 \let\APLrightarrowbox\textAPLrightarrowbox
 20219 \let\APLuparrowbox\textAPLuparrowbox
 20220 \let\APLdownarrowbox\textAPLdownarrowbox
 20221 \let\APLinput\textAPLinput
 20222 \let\Request\textRequest
 20223 \let\Beam\textBeam
 20224 \let\hexagon\texthexagon
 20225 \let\APLbox\textAPLbox
 20226 \let\ForwardToIndex\textForwardToIndex
 20227 \let\RewindToIndex\textRewindToIndex
 20228 \let\bbslash\textbbslash
 20229 \let\CircledA\textCircledA
 20230 \let\CleaningF\textCleaningF
 20231 \let\CleaningFF\textCleaningFF
 20232 \let\CleaningP\textCleaningP
 20233 \let\CleaningPP\textCleaningPP
 20234 \let\CuttingLine\textCuttingLine
 20235 \let\UParrow\textUParrow
 20236 \let\bigtriangleup\textbigtriangleup
 20237 \let\Forward\textForward
 20238 \let\triangleright\texttriangleright
 20239 \let\RHD\textRHD
 20240 \let\DOWNarrow\textDOWNarrow
 20241 \let\bigtriangledown\textbigtriangledown
 20242 \let\Rewind\textRewind
 20243 \let\triangleleft\texttriangleleft
 20244 \let\LHD\textLHD
 20245 \let\diamond\textdiamond
 20246 \let\lozenge\textlozenge
 20247 \let\LEFTCIRCLE\textLEFTCIRCLE
 20248 \let\RIGHTCIRCLE\textRIGHTCIRCLE

20249 \let\openbullet\textopenbullet
 20250 \let\boxbar\textboxbar
 20251 \let\bigcircle\textbigcircle
 20252 \let\Cloud\textCloud
 20253 \let\FiveStar\textFiveStar
 20254 \let\FiveStarOpen\textFiveStarOpen
 20255 \let\Phone\textPhone
 20256 \let\boxempty\textboxempty
 20257 \let\Checkedbox\textCheckedbox
 20258 \let\Crossedbox\textCrossedbox
 20259 \let\Coffeecup\textCoffeecup
 20260 \let\HandCuffLeft\textHandCuffLeft
 20261 \let\HandCuffRight\textHandCuffRight
 20262 \let\HandLeft\textHandLeft
 20263 \let\HandRight\textHandRight
 20264 \let\Radioactivity\textRadioactivity
 20265 \let\Biohazard\textBiohazard
 20266 \let\Ankh\textAnkh
 20267 \let\YinYang\textYinYang
 20268 \let\frownie\textfrownie
 20269 \let\smiley\textsmiley
 20270 \let\blacksmiley\textblacksmiley
 20271 \let\sun\textsun
 20272 \let\leftmoon\textleftmoon
 20273 \let\rightmoon\textrightmoon
 20274 \let\mercury\textmercury
 20275 \let\earth\textearth
 20276 \let\male\textmale
 20277 \let\jupiter\textjupiter
 20278 \let\saturn\textsaturn
 20279 \let\uranus\texturanus
 20280 \let\neptune\textneptune
 20281 \let\pluto\textpluto
 20282 \let\aries\textaries
 20283 \let\taurus\texttaurus
 20284 \let\gemini\textgemini
 20285 \let\cancer\textcancer
 20286 \let\leo\textleo
 20287 \let\virgo\textvirgo
 20288 \let\libra\textlibra
 20289 \let\scorpio\textscorpio
 20290 \let\sagittarius\textsagittarius
 20291 \let\capricornus\textcapricornus
 20292 \let\aquarius\textaquarius
 20293 \let\pisces\textpisces
 20294 \let\quarternote\textquarternote
 20295 \let\twonotes\texttwonotes
 20296 \let\sixteenthnote\textsixteenthnote
 20297 \let\flat\textflat
 20298 \let\natural\textnatural
 20299 \let\sharp\textsharp
 20300 \let\recycle\textrecycle
 20301 \let\Wheelchair\textWheelchair
 20302 \let\Flag\textFlag

20303 \let\MineSign\textMineSign
 20304 \let\dsmlilitary\textdsmlilitary
 20305 \let\dsmedical\textdsmedical
 20306 \let\dsjuridical\textdsjuridical
 20307 \let\dschemical\textdschemical
 20308 \let\dsbiological\textdsbiological
 20309 \let\dscommercial\textdscommercial
 20310 \let\manstar\textmanstar
 20311 \let\danger\textdanger
 20312 \let\FemaleFemale\textFemaleFemale
 20313 \let\MaleMale\textMaleMale
 20314 \let\FemaleMale\textFemaleMale
 20315 \let\Hermaphrodite\textHermaphrodite
 20316 \let\Neutral\textNeutral
 20317 \let\hexstar\texthexstar
 20318 \let\SunCload\textSunCload
 20319 \let\Rain\textRain
 20320 \let\noway\textnoway
 20321 \let\Mountain\textMountain
 20322 \let\Tent\textTent
 20323 \let\ScissorRight\textScissorRight
 20324 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 20325 \let\ScissorHollowRight\textScissorHollowRight
 20326 \let\PhoneHandset\textPhoneHandset
 20327 \let\Tape\textTape
 20328 \let\Plane\textPlane
 20329 \let\Envelope\textEnvelope
 20330 \let\Peace\textPeace
 20331 \let\WritingHand\textWritingHand
 20332 \let\PencilRightDown\textPencilRightDown
 20333 \let\PencilRight\textPencilRight
 20334 \let\PencilRightUp\textPencilRightUp
 20335 \let\NibRight\textNibRight
 20336 \let\NibSolidRight\textNibSolidRight
 20337 \let\Checkmark\textCheckmark
 20338 \let\CheckmarkBold\textCheckmarkBold
 20339 \let\XSolid\textXSolid
 20340 \let\XSolidBold\textXSolidBold
 20341 \let\XSolidBrush\textXSolidBrush
 20342 \let\PlusOutline\textPlusOutline
 20343 \let\Plus\textPlus
 20344 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 20345 \let\PlusCenterOpen\textPlusCenterOpen
 20346 \let\Cross\textCross
 20347 \let\CrossOpenShadow\textCrossOpenShadow
 20348 \let\CrossOutline\textCrossOutline
 20349 \let\CrossMaltese\textCrossMaltese
 20350 \let\DavidStar\textDavidStar
 20351 \let\FourAsterisk\textFourAsterisk
 20352 \let\JackStar\textJackStar
 20353 \let\JackStarBold\textJackStarBold
 20354 \let\ClowerTips\textClowerTips
 20355 \let\FourStar\textFourStar
 20356 \let\FourStarOpen\textFourStarOpen

20357 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 20358 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 20359 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 20360 \let\FiveStarOutline\textFiveStarOutline
 20361 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 20362 \let\FiveStarConvex\textFiveStarConvex
 20363 \let\FiveStarShadow\textFiveStarShadow
 20364 \let\AsteriskBold\textAsteriskBold
 20365 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 20366 \let\EightStarTaper\textEightStarTaper
 20367 \let\EightStarConvex\textEightStarConvex
 20368 \let\SixStar\textSixStar
 20369 \let\EightStar\textEightStar
 20370 \let\EightStarBold\textEightStarBold
 20371 \let\TwelveStar\textTwelveStar
 20372 \let\SixteenStarLight\textSixteenStarLight
 20373 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 20374 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 20375 \let\Asterisk\textAsterisk
 20376 \let\SixFlowerAlternate\textSixFlowerAlternate
 20377 \let\FiveFlowerPetal\textFiveFlowerPetal
 20378 \let\FiveFlowerOpen\textFiveFlowerOpen
 20379 \let\EightFlowerPetal\textEightFlowerPetal
 20380 \let\SunshineOpenCircled\textSunshineOpenCircled
 20381 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 20382 \let\SnowflakeChevron\textSnowflakeChevron
 20383 \let\Snowflake\textSnowflake
 20384 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 20385 \let\Sparkle\textSparkle
 20386 \let\SparkleBold\textSparkleBold
 20387 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 20388 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 20389 \let\EightAsterisk\textEightAsterisk
 20390 \let\CircleShadow\textCircleShadow
 20391 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 20392 \let\SquareTopRight\textSquareTopRight
 20393 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 20394 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 20395 \let\DiamondSolid\textDiamondSolid
 20396 \let\RectangleThin\textRectangleThin
 20397 \let\Rectangle\textRectangle
 20398 \let\RectangleBold\textRectangleBold
 20399 \let\perp\textperp
 20400 \let\notperp\textnotperp
 20401 \let\veedot\textveedot
 20402 \let\wedgedot\textwedgedot
 20403 \let\leftspoon\textleftspoon
 20404 \let\lbrackdbl\textlbrackdbl
 20405 \let\rbrackdbl\textrbrackdbl
 20406 \let\circlearrowleft\textcirclearrowleft
 20407 \let\circlearrowright\textcirclearrowright
 20408 \let\longleftarrow\textlongleftarrow
 20409 \let\longrightarrow\textlongrightarrow
 20410 \let\longlefttrightarrow\textlonglefttrightarrow

20411 $\backslash\text{let}\backslash\text{Longleftarrow}\backslash\text{textLongleftarrow}$
 20412 $\backslash\text{let}\backslash\text{Longrightarrow}\backslash\text{textLongrightarrow}$
 20413 $\backslash\text{let}\backslash\text{Longleftrightarrow}\backslash\text{textLongleftrightarrow}$
 20414 $\backslash\text{let}\backslash\text{longmapsto}\backslash\text{textlongmapsto}$
 20415 $\backslash\text{let}\backslash\text{Longmapsfrom}\backslash\text{textLongmapsfrom}$
 20416 $\backslash\text{let}\backslash\text{Longmapsto}\backslash\text{textLongmapsto}$
 20417 $\backslash\text{let}\backslash\text{nwsearrow}\backslash\text{textnwsearrow}$
 20418 $\backslash\text{let}\backslash\text{neswarrow}\backslash\text{textneswarrow}$
 20419 $\backslash\text{let}\backslash\text{hookrightarrow}\backslash\text{texthookrightarrow}$
 20420 $\backslash\text{let}\backslash\text{rhookrightarrow}\backslash\text{textrhookrightarrow}$
 20421 $\backslash\text{let}\backslash\text{hooksearrow}\backslash\text{texthooksearrow}$
 20422 $\backslash\text{let}\backslash\text{rhookswarrow}\backslash\text{textrhookswarrow}$
 20423 $\backslash\text{let}\backslash\text{leadsto}\backslash\text{textleadsto}$
 20424 $\backslash\text{let}\backslash\text{rcurvearrowne}\backslash\text{textrcurvearrowne}$
 20425 $\backslash\text{let}\backslash\text{lcurvearrowse}\backslash\text{textlcurvearrowse}$
 20426 $\backslash\text{let}\backslash\text{lcurvearrowsw}\backslash\text{textlcurvearrowsw}$
 20427 $\backslash\text{let}\backslash\text{rcurvearrowse}\backslash\text{textrcurvearrowse}$
 20428 $\backslash\text{let}\backslash\text{lcurvearrowdown}\backslash\text{textlcurvearrowdown}$
 20429 $\backslash\text{let}\backslash\text{rcurvearrowdown}\backslash\text{textrcurvearrowdown}$
 20430 $\backslash\text{let}\backslash\text{rcurvearrowleft}\backslash\text{textrcurvearrowleft}$
 20431 $\backslash\text{let}\backslash\text{rcurvearrowright}\backslash\text{textrcurvearrowright}$
 20432 $\backslash\text{let}\backslash\text{leftrightharpoon}\backslash\text{textleftrightharpoon}$
 20433 $\backslash\text{let}\backslash\text{rightleftharpoon}\backslash\text{textrightleftharpoon}$
 20434 $\backslash\text{let}\backslash\text{updownharpoonrightleft}\backslash\text{textupdownharpoonrightleft}$
 20435 $\backslash\text{let}\backslash\text{updownharpoonleftright}\backslash\text{textupdownharpoonleftright}$
 20436 $\backslash\text{let}\backslash\text{leftleftharpoons}\backslash\text{textleftleftharpoons}$
 20437 $\backslash\text{let}\backslash\text{upupharpoons}\backslash\text{textupupharpoons}$
 20438 $\backslash\text{let}\backslash\text{righttrightharpoons}\backslash\text{textrighttrightharpoons}$
 20439 $\backslash\text{let}\backslash\text{downdownharpoons}\backslash\text{textdowndownharpoons}$
 20440 $\backslash\text{let}\backslash\text{leftbarharpoon}\backslash\text{textleftbarharpoon}$
 20441 $\backslash\text{let}\backslash\text{barleftharpoon}\backslash\text{textbarleftharpoon}$
 20442 $\backslash\text{let}\backslash\text{rightbarharpoon}\backslash\text{textrightbarharpoon}$
 20443 $\backslash\text{let}\backslash\text{barrightharpoon}\backslash\text{textbarrightharpoon}$
 20444 $\backslash\text{let}\backslash\text{updownharpoons}\backslash\text{textupdownharpoons}$
 20445 $\backslash\text{let}\backslash\text{downupharpoons}\backslash\text{textdownupharpoons}$
 20446 $\backslash\text{let}\backslash\text{moo}\backslash\text{textmoo}$
 20447 $\backslash\text{let}\backslash\text{llparenthesis}\backslash\text{textllparenthesis}$
 20448 $\backslash\text{let}\backslash\text{rrparenthesis}\backslash\text{textrrparenthesis}$
 20449 $\backslash\text{let}\backslash\text{invdiameter}\backslash\text{textinvdiameter}$
 20450 $\backslash\text{let}\backslash\text{obar}\backslash\text{textobar}$
 20451 $\backslash\text{let}\backslash\text{obslash}\backslash\text{textobslash}$
 20452 $\backslash\text{let}\backslash\text{obot}\backslash\text{textobot}$
 20453 $\backslash\text{let}\backslash\text{NoChemicalCleaning}\backslash\text{textNoChemicalCleaning}$
 20454 $\backslash\text{let}\backslash\text{olessthan}\backslash\text{textolessthan}$
 20455 $\backslash\text{let}\backslash\text{ogreaterthan}\backslash\text{textogreaterthan}$
 20456 $\backslash\text{let}\backslash\text{boxslash}\backslash\text{textboxslash}$
 20457 $\backslash\text{let}\backslash\text{boxbslash}\backslash\text{textboxbslash}$
 20458 $\backslash\text{let}\backslash\text{boxast}\backslash\text{textboxast}$
 20459 $\backslash\text{let}\backslash\text{boxcircle}\backslash\text{textboxcircle}$
 20460 $\backslash\text{let}\backslash\text{boxbox}\backslash\text{textboxbox}$
 20461 $\backslash\text{let}\backslash\text{Valve}\backslash\text{textValve}$
 20462 $\backslash\text{let}\backslash\text{multimapboth}\backslash\text{textmultimapboth}$
 20463 $\backslash\text{let}\backslash\text{shuffle}\backslash\text{textshuffle}$
 20464 $\backslash\text{let}\backslash\text{uplus}\backslash\text{textuplus}$

20465 \let\bigdoublewedge\textbigdoublewedge
 20466 \let\bigdoublevee\textbigdoublevee
 20467 \let\Join\textJoin
 20468 \let\fatsemi\textfatsemi
 20469 \let\circplus\textcircplus
 20470 \let\minusdot\textminusdot
 20471 \let\dottimes\textdottimes
 20472 \let\dtimes\textdtimes
 20473 \let\odiv\textodiv
 20474 \let\invneg\textinvneg
 20475 \let\squdoublecap\textsqudoublecap
 20476 \let\capdot\textcapdot
 20477 \let\squdoublecup\textsqudoublecup
 20478 \let\doublewedge\textdoublewedge
 20479 \let\doublevee\textdoublevee
 20480 \let\doublebarwedge\textdoublebarwedge
 20481 \let\veedoublebar\textveedoublebar
 20482 \let\eqdot\texteqdot
 20483 \let\neqdot\textneqdot
 20484 \let\coloncolonequals\textcoloncolonequals
 20485 \let\leqslant\textleqslant
 20486 \let\leqslant\textleqslant
 20487 \let\geqslant\textgeqslant
 20488 \let\ngeqslant\textngeqslant
 20489 \let\lessapprox\textlessapprox
 20490 \let\llessapprox\textllessapprox
 20491 \let\gtrapprox\textgtrapprox
 20492 \let\ngtrapprox\textngtrapprox
 20493 \let\lneq\textlneq
 20494 \let\gneq\textgneq
 20495 \let\lnapprox\textlnapprox
 20496 \let\gnapprox\textgnapprox
 20497 \let\lesseqqgtr\textlesseqqgtr
 20498 \let\gtreqqless\textgtreqqless
 20499 \let\eqslantless\texteqslantless
 20500 \let\eqslantgtr\texteqslantgtr
 20501 \let\leftslice\textleftslice
 20502 \let\rightslice\textrightslice
 20503 \let\preceq\textpreceq
 20504 \let\preceq\textpreceq
 20505 \let\succeq\textsucceq
 20506 \let\succeq\textsucceq
 20507 \let\precneq\textprecneq
 20508 \let\succneq\textsuccneq
 20509 \let\preceqq\textpreceqq
 20510 \let\preceqq\textpreceqq
 20511 \let\succeqq\textsucceqq
 20512 \let\succeqq\textsucceqq
 20513 \let\precneqq\textprecneqq
 20514 \let\succneqq\textsuccneqq
 20515 \let\precapprox\textprecapprox
 20516 \let\precapprox\textprecapprox
 20517 \let\succapprox\textsuccapprox
 20518 \let\succapprox\textsuccapprox

20519 \let\precnapprox\textprecnapprox
 20520 \let\succnapprox\textsuccnapprox
 20521 \let\subseteqq\textsubseteqq
 20522 \let\subsetseteqq\textsubsetseteqq
 20523 \let\supseteqq\textsupseteqq
 20524 \let\supsetseteqq\textsupsetseteqq
 20525 \let\dashV\textdashV
 20526 \let\ndashV\textndashV
 20527 \let\Dashv\textDashv
 20528 \let\ndashv\textndashv
 20529 \let\DashV\textDashV
 20530 \let\ndashV\textndashV
 20531 \let\downmodels\textdownmodels
 20532 \let\ndownmodels\textndownmodels
 20533 \let\upmodels\textupmodels
 20534 \let\upmodels\textupmodels
 20535 \let\upspoon\textupspoon
 20536 \let\interleave\textinterleave
 20537 \let\slash\textslash
 20538 \let\pentagon\textpentagon
 20539 \let\varhexagon\textvarhexagon
 20540 \let\jinferior\textjinferior
 20541 \let\slashdiv\textslashdiv
 20542 \let\fivedots\textfivedots
 20543 \let\oo\textoo
 20544 \let\GaPa\textGaPa
 20545 \let\HaPa\textHaPa
 20546 \let\ViPa\textViPa
 20547 \let\AcPa\textAcPa
 20548 \let\SePa\textSePa
 20549 \let\ZwPa\textZwPa
 20550 \let\fullnote\textfullnote
 20551 \let\halfnote\texthalfnote
 20552 \let\Vier\textVier
 20553 \let\Acht\textAcht
 20554 \let\Sech\textSech
 20555 \let\Zwdr\textZwdr
 20556 \let\Mundus\textMundus
 20557 \let\Moon\textMoon
 20558 \let\ManFace\textManFace
 20559 \let\WomanFace\textWomanFace
 20560 \let\Fax\textFax
 20561 \let\Fire\textFire
 20562 \let\Bicycle\textBicycle
 20563 \let\Gentsroom\textGentsroom
 20564 \let\Ladiesroom\textLadiesroom
 20565 \let\ccnc\textccnc
 20566 \let\ccsa\textccsa
 20567 \let\Info\textInfo
 20568 \let\CESign\textCESign
 20569 \let\neg\textneg
 20570 \let\times\texttimes
 20571 \let\div\textdiv
 20572 \let\pm\textpm

20573 \let\cdot\textcdot
 20574 }% \psdmapshortnames
 20575 \newcommand*{\psdaliasnames}{%
 20576 \let\epsdice\HyPsd@DieFace
 20577 \let\fcdice\HyPsd@DieFace
 20578 \let\MoonPha\HyPsd@MoonPha
 20579 \let\mathdollar\textdollar
 20580 \let\EyesDollar\textdollar
 20581 \let\binampersand\textampersand
 20582 \let\with\textampersand
 20583 \let\mathunderscore\textunderscore
 20584 \let\textvertline\textbar
 20585 \let\mathsterling\textsterling
 20586 \let\pounds\textsterling
 20587 \let\brokenvert\textbrokenbar
 20588 \let\mathsection\textsection
 20589 \let\S\textsection
 20590 \let\mathparagraph\textparagraph
 20591 \let\MultiplicationDot\textperiodcentered
 20592 \let\Squaredot\textperiodcentered
 20593 \let\vartimes\textmultiply
 20594 \let\MVMultiplication\textmultiply
 20595 \let\eth\dh
 20596 \let\crossd\textcrd
 20597 \let\textbard\textcrd
 20598 \let\bard\textcrd
 20599 \let\textcrh\texthbar
 20600 \let\crossh\texthbar
 20601 \let\planck\texthbar
 20602 \let\eng\ng
 20603 \let\engma\ng
 20604 \let\crossb\textcrb
 20605 \let\textbarb\textcrb
 20606 \let\barb\textcrb
 20607 \let\Florin\textflorin
 20608 \let\hv\texthvl
 20609 \let\hausak\texthtk
 20610 \let\crossnilambda\textcrlambda
 20611 \let\barlambda\textcrlambda
 20612 \let\lambdabar\textcrlambda
 20613 \let\lambdaslash\textcrlambda
 20614 \let\textnrleg\textPUnrleg
 20615 \let\textpipevar\textpipe
 20616 \let\textdoublepipevar\textdoublepipe
 20617 \let\textdoublebarpipevar\textdoublebarpipe
 20618 \let\textcrg\textgslash
 20619 \let\textdblig\textPUdblig
 20620 \let\textqplig\textPUqplig
 20621 \let\textcentoldstyle\textslashc
 20622 \let\textbarc\textslashc
 20623 \let\inva\textturna
 20624 \let\vara\textscripta
 20625 \let\invscripta\textturnscripta
 20626 \let\rotvara\textturnscripta

20627 \let\hookb\texthtb
 20628 \let\hausab\texthtb
 20629 \let\varopeno\textopeno
 20630 \let\curlyc\textctc
 20631 \let\taild\textrtaild
 20632 \let\hookd\texthtd
 20633 \let\hausad\texthtd
 20634 \let\er\textrhooschwa
 20635 \let\epsi\textniepsilon
 20636 \let\hookrepsilon\textrhoorepsilon
 20637 \let\closedrepsilon\textcloserepsilon
 20638 \let\barj\textbardotlessj
 20639 \let\hookg\texthtg
 20640 \let\varg\textscriptg
 20641 \let\vod\textipagamma
 20642 \let\invh\textturnh
 20643 \let\udesc\textturnh
 20644 \let\hookh\texthth
 20645 \let\voicedh\texthth
 20646 \let\hookheng\texththeng
 20647 \let\ibar\textbari
 20648 \let\vari\textniiota
 20649 \let\tildel\textltilde
 20650 \let\latfric\textbeltl
 20651 \let\taill\textrtail
 20652 \let\lz\textlyoghlig
 20653 \let\invm\textturnm
 20654 \let\rotm\textturnm
 20655 \let\legm\textturnmrleg
 20656 \let\labdentalnas\textltailm
 20657 \let\emgma\textltailm
 20658 \let\nj\textltailn
 20659 \let\enya\textltailn
 20660 \let\tailn\textrtailn
 20661 \let\closedniomega\textcloseomega
 20662 \let\varomega\textcloseomega
 20663 \let\invr\textturnr
 20664 \let\rotr\textturnr
 20665 \let\invlegr\textturnlonglegr
 20666 \let\tailinvr\textturnrrtail
 20667 \let\legr\textlonglegr
 20668 \let\tailr\textrtailr
 20669 \let\flapr\textfishhookr
 20670 \let\flap\textfishhookr
 20671 \let\tails\textrtails
 20672 \let\curlyesh\textctesh
 20673 \let\clickt\textturnt
 20674 \let\tailt\textrtailt
 20675 \let\ubar\textbaru
 20676 \let\rotOmega\textniupsilon
 20677 \let\invv\textturnv
 20678 \let\pwedge\textturnv
 20679 \let\invw\textturnw
 20680 \let\rotw\textturnw

20681 \let\invy\textturny
 20682 \let\roty\textturny
 20683 \let\tailz\textrtailz
 20684 \let\curlyz\textctz
 20685 \let\curlyyogh\textctyogh
 20686 \let\ejective\textglotstop
 20687 \let\glottal\textglotstop
 20688 \let\reveject\textrevglotstop
 20689 \let\clickc\textstretchc
 20690 \let\textstretchcvar\textstretchc
 20691 \let\clickb\textbullseye
 20692 \let\textObullseye\textbullseye
 20693 \let\textctjvar\textctj
 20694 \let\textturnsck\textturnk
 20695 \let\dz\textdzlig
 20696 \let\tesh\textteshlig
 20697 \let\digamma\textdigammagreek
 20698 \let\hardsign\cyrhrdsn
 20699 \let\softsign\cyrsoftsn
 20700 \let\hebsin\hebshin
 20701 \let\textsck\textPUsc
 20702 \let\textscm\textPUscm
 20703 \let\textscp\textPUscp
 20704 \let\textrevscr\textPUrevscr
 20705 \let\textrhooka\textPURhooka
 20706 \let\textrhooke\textPURhooke
 20707 \let\textrhookepsilon\textPURhookepsilon
 20708 \let\textrhookopeno\textPURhookopeno
 20709 \let\textdoublevertline\textbardbl
 20710 \let\dag\textdagger
 20711 \let\ddagger\textdaggerdbl
 20712 \let\ddag\textdaggerdbl
 20713 \let\mathellipsis\textellipsis
 20714 \let\EurDig\texteuro
 20715 \let\EURdig\texteuro
 20716 \let\EurHv\texteuro
 20717 \let\EURhv\texteuro
 20718 \let\EurCr\texteuro
 20719 \let\EURcr\texteuro
 20720 \let\EurTm\texteuro
 20721 \let\EURtm\texteuro
 20722 \let\Eur\texteuro
 20723 \let\Denarius\textDeleatur
 20724 \let\agemO\textmho
 20725 \let\EstimatedSign\textestimated
 20726 \let\Ecommerce\textestimated
 20727 \let\bindnasrepma\textinvamp
 20728 \let\parr\textinvamp
 20729 \let\MVRightArrow\textrightarrow
 20730 \let\MVRightarrow\textrightarrow
 20731 \let\MVArrowDown\textdownarrow
 20732 \let\Force\textdownarrow
 20733 \let\textglobrise\textnearrow
 20734 \let\textglobfall\textsearrow

20735 \let\Lightning\textlightning
 20736 \let\Conclusion\textRightarrow
 20737 \let\dashedleftarrow\textdashleftarrow
 20738 \let\dashedrightarrow\textdashrightarrow
 20739 \let\varnothing\textemptyset
 20740 \let\owns\textni
 20741 \let\notni\textnotowner
 20742 \let\varprop\textpropto
 20743 \let\varangle\textsphericalangle
 20744 \let\Anglesign\textsphericalangle
 20745 \let\AngleSign\textsphericalangle
 20746 \let\notdivides\textnmid
 20747 \let\varowedge\textowedge
 20748 \let\varovee\textovee
 20749 \let\varint\textint
 20750 \let\varoint\textoint
 20751 \let\downtherefore\textbecause
 20752 \let\textdotdiv\textdotminus
 20753 \let\AC\textsim
 20754 \let\wreath\textwr
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