

Hypertext marks in L^AT_EX

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

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1 Documentation overview for hyperref

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

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

ChangeLog This file records the version history.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

`backref.dtx` “Back referencing from bibliographical citations”

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

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3 File hyccheck.tex

Many commands of L^AT_EX or other packages cannot be overloaded, but have to be redefined by hyperref directly. If these commands change in newer versions, these changes are not noticed by hyperref. With this test file this situation can be checked. It defines the command `\checkcommand` that is more powerful than L^AT_EX's `\CheckCommand`, because it takes `\DeclareRobustCommand` and optional parameters better into account.

```
1 (*check)
2 \documentclass{article}
3 \makeatletter
```

`\checklatex` Optional argument: release date of L^AT_EX.

```
4 \newcommand*{\checklatex}[1][]{%
5   \typeout{}}%
6   \typeout{* Format: `LaTeX2e' #1}%
7   \typeout{\space\space Loaded: `fmtname' \fmtversion}%
8 }
```

`\checkpackage` The argument of `\checkpackage` is the package name without extension optionally followed by a release date.

```
9 \newcommand*{\checkpackage}[1]{%
10  \def\HyC@package{#1}%
11  \let\HyC@date\@empty
12  \@ifnextchar[\HyC@getDate\HyC@checkPackage
13 }
```

`\HyC@getDate` The release date is scanned.

```
14 \def\HyC@getDate[#1]{%
15  \def\HyC@date{#1}%
16  \HyC@checkPackage
17 }
```

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{%
19  \typeout{}}%
20  \begingroup
21  \edef\x{\endgroup
22    \noexpand\RequirePackage{\HyC@package}%
23    \ifx\HyC@date\@empty\relax\else\HyC@date\fi%
24  }%
25  \x
26  \typeout{}}%
27  \typeout{%
28    * Package `HyC@package'%
29    \ifx\HyC@date\@empty
30    \else
31      \space\HyC@date
32    \fi
33  }%
34  \@ifundefined{ver@\HyC@package.sty}{%
35  }{%
36    \typeout{%
```

```

37   \space\space Loaded: `\'HyC@package' %
38   \csname ver@\'HyC@package.sty\endcsname
39   }%
40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a L^AT_EX definition and compares this definition with the current meaning of that command.

```

42 \newcommand*{\checkcommand}[1]{%
43   \begingroup
44   \ifx\long#1\relax
45     \expandafter\'HyC@checklong
46   \else
47     \def\'HyC@defcmd{#1}%
48     \expandafter\let\expandafter\'HyC@next
49     \csname HyC@\expandafter\@gobble\string#1\endcsname
50     \expandafter\'HyC@checkcommand
51   \fi
52 }

```

`\HyC@checklong` The definition command `\def` or `\edef` is read.

```

53 \def\'HyC@checklong#1{%
54   \def\'HyC@defcmd{\long#1}%
55   \expandafter\let\expandafter\'HyC@next
56   \csname HyC@\expandafter\@gobble\string#1\endcsname
57   \'HyC@checkcommand
58 }

```

`\HyC@checkcommand` The optional star of L^AT_EX's definitions is parsed.

```

59 \def\'HyC@checkcommand{%
60   \ifx\'HyC@next\relax
61     \PackageError{hycheck}{%
62       Unknown command `\'expandafter\strip@prefix\meaning\'HyC@cmd'%
63     }{\@ehd
64     \expandafter\endinput
65   \fi
66   \@ifstar{%
67     \def\'HyC@star{*}%
68     \'HyC@check
69   }{%
70     \let\'HyC@star\@empty
71     \'HyC@check
72   }%
73 }

```

`\HyC@check` The macro `\HyC@check` reads the definition command.

```

74 \def\'HyC@check#1{%
75   \def\'HyC@cmd{#1}%
76   \let\'HyC@org@cmd#1%
77   \let#1\relax
78   \let\'HyC@param\@empty
79   \'HyC@Toks{}%
80   \let\'HyC@org@optcmd\'HyC@noValue
81   \let\'HyC@org@robustcmd\'HyC@noValue

```



```

82 \let\HyC@org@robustoptcmd\HyC@noValue
83 \HyC@next
84 }

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```

`\HyC@newcommand` The code for `\newcommand`.

```

86 \def\HyC@newcommand{%
87 \let\HyC@@@cmd\HyC@cmd
88 \ifnextchar[\HyC@nc@opt\HyC@nc@noopt
89 }

```

`\HyC@Toks` A register for storing the default value of an optional argument.

```

90 \newtoks\HyC@Toks

```

`\HyC@nc@noopt` This macro `\HyC@nc@noopt` is called, if the parser has reached the definition text.

```

91 \long\def\HyC@nc@noopt#1{%
92 \edef\x{%
93 \expandafter\noexpand\HyC@defcmd
94 \HyC@star
95 \expandafter\noexpand\HyC@cmd
96 \HyC@param\the\HyC@Toks
97 }%
98 \x{#1}%
99 \HyC@doCheck
100 }

```

`\HyC@nc@opt` This macro scans the first optional argument of a `LATEX` definition (number of arguments).

```

101 \def\HyC@nc@opt[#1]{%
102 \def\HyC@param{{#1}}%
103 \ifnextchar[\HyC@nc@default\HyC@nc@noopt
104 }

```

`\HyC@nc@default` Macro `\HyC@nc@default` scans the default for an optional argument.

```

105 \def\HyC@nc@default[#1]{%
106 \HyC@Toks={{#1}}%
107 \edef\HyC@optcmd{%
108 \expandafter\noexpand
109 \csname\expandafter\string\HyC@@@cmd\endcsname
110 }%
111 \expandafter\let\expandafter\HyC@org@optcmd\HyC@optcmd
112 \HyC@nc@noopt
113 }

```

`\HyC@DeclareRobustCommand` `\DeclareRobustCommand{\cmd}` makes the command `\cmd` robust, that then calls `\cmdl` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```

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

```

```

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

```

`\HyC@def` The parameter text of `\def` or `\edef` is stored in the token register `\HyC@Toks`.

```

\HyC@edef 125 \def\HyC@def#1#1{%
126 \HyC@Toks={#1}%
127 \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

```

`\HyC@doCheck` This command performs the checks and prints the result.

```

130 \def\HyC@doCheck{%
131 \typeout{* Checking `'\HyC@string\HyC@cmd':}%
132 \HyC@checkItem{cmd}%
133 \HyC@checkItem{robustcmd}%
134 \HyC@checkItem{optcmd}%
135 \HyC@checkItem{robustoptcmd}%
136 \endgroup
137 }

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

`\HyC@checkOk` The result, if the check succeeds.

```

154 \def\HyC@checkOk#1{%
155 \typeout{\space\space'\HyC@string#1' ok.}%
156 }

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

```

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

```

\Hy@RestoreCatcodes

```

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

```

231 \Hy@SetCatcodes

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@pdfitwindowfalse
423 \Hy@hyperfootnotesttrue
424 \Hy@hyperindextrue
425 \Hy@hypertextnamestrue
426 \Hy@implicittrue
427 \Hy@linktocpagefalse
428 \Hy@localanchornamfalse
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).

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

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

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

Example (TeX):

```

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

```

`\hypercalsbp`

```

469 \def\hypercalsbp#1{%
470 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
471 }%
472 \def\hypercalsbpdef{\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.

`ppercaseUnsupportedInPdfStrings`
`lowercaseUnsupportedInPdfStrings`

```

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

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

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

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

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

```

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

```

Package pifont.

```

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

```

Environments.

```

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

```

Package color.

```

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

```

Upper- and lowercase.

```

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

```

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

```

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

```

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

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

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

  Disable \cyr, used in russianb.ldf.
609 \let\cyr\relax
```

Package german.

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

Package french. The support is deferred, because it needs `\GenericError` to be disabled (see below).

Package FrenchPro. This package uses:

```
\if@mid@expandable{not fully expandable code}{fully expandable
code}

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

AMS classes.

```
619 \HyPsd@AMSclassfix
```

Redefinition of `\hspace` `\hspace` don't work in bookmarks, the following fix tries to set a space if the argument is a positive length.

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

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

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


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

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

Miscellaneous commands.

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

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

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

Patch for cjk bookmarks.

```
636 \HyPsd@CJKhook
```

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

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

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

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

Package `xspace`.

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

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

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

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

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

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

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

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

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

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

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

Support for package 'xargs':

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

6.2.2 Expansion

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

\protected@edef: The weakest form isn't usable, because it does not expand the font encoding commands. They are made robust and protect themselves.

\csname: First the string is expanded within a \csname and \endcsname. Then the command name is converted to characters with catcode 12 by \string and the first escape character removed by \@gobble. This method has the great *advantage* that stomach tokens that aren't allowed in PDF strings are detected by T_EX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. T_EX provides no way to catch the error caused by \csname or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option **exactdef** in previous versions less or equal 6.50.

\edef This version uses this standard form for expansion. It is stronger than L^AT_EX's \protected@edef. So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of L^AT_EX doesn't work within an \edef, there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see \texorpdfstring). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with \csname. However a PDF reader isn't T_EX, so these tokens are viewed verbatim. So this

version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

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

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

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

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

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

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

6.2.3 Postprocessing

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

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

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

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

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

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

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

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

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

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

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

`\HyPsd@CheckCatcodes` should no have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause to many errors before, there should now be only tokens with catcodes 11 or 12. So I think there is no need for a safety step like:

```
\xdef#1{\expandafter\strip@prefix\meaning#1}%
```

Looking for wrong glyphs. The case that glyphs aren't defined in the PD1 encoding is caught above in such a way, that the glyph name and a marker is inserted into the string. Now we can safely scan the string for this marker and provide a descriptive warning.

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

```

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

```

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

```

693 \HyPsd@StringSubst{\}{\textbackslash}#1%

```

Spaces. All spaces have already the form `\040`. The last postprocessing step will be an optimizing of the spaces, so we already introduce already the necessary command `\HyPsd@SPACEOPTI`. But first it is defined to be `\relax` in order to prevent a too early expansion by an `\edef`. Secondly a `\relax` serves as a marker for a token that is detected by `\xspace`.

The code of `frenchb.ldf` can produce an additional space before `\guillemetright`, because `\lastskip` and `\unskip` do not work. Therefore it is removed here.

```

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

```

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

```

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

```

Support for package `xspace`. `\xspace` looks for the next token and decides if it expands to a space or not. Following tokens prevent its transformation to a space: Beginning and end of group, handled above by replacing by an italic correction, several punctuation marks, a closing parentheses, and several spaces.

Without package `xspace` there are tokens with catcode 11 and 12, `\HyPsd@empty` and `\HyPsd@SPACEOPTI`. With package `xspace` marker for the italic correction `\/` and `\xspace` come with. In the package `xspace` case the two markers are replaced by commands and an `\edef` performs the `\xspace` processing.

In the opposite of the original `\xspace` `\HyPsd@xspace` uses an argument instead of a `\futurelet`, so we have to provide such an argument, if `\HyPsd@xspace` comes last. Because `\HyPsd@Subst` with several equal tokens (`--`) needs a safe last token, in both cases the string gets an additional `\HyPsd@empty`.

```

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

```

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

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

```

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

```

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

```

733 \let\HyPsd@empty\@empty

```

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

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

```

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

```

```

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

```

Optimizing spaces. Spaces are often used, but they have a very long form \040. They are converted back to real spaces, but not all, so that no space follows after another. In the bookmark case several spaces are written to the .out file, but if the entries are read back, several spaces are merged to a single one.

With Unicode the spaces are replaced by their octal sequences.

```

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

```

Converting to Unicode. At last the eight bit letters have to be converted to Unicode, the masks \8 and \9 are removed and the Unicode marker is added.

```

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

```

Try conversion back to PDFDocEncoding.

```

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

```

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

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

`\Hy@pdfstringdef`

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

6.3 Encodings

6.3.1 XeTeX

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

6.3.2 Workaround for package linguex

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

6.3.3 Catcodes saving and restoring for .def files

`\Hy@SaveCatcodeSettings`

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



```

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

```

`\Hy@RestoreCatcodeSettings`

```

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

```

6.3.4 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with L^AT_EX 2_ε's NFSS. Because the informational strings are not set by T_EX's typesetting mechanism but for interpreting by the PDF reader, the glyphs of the PD1 encoding are implemented to be safely written to a file (PDF output file, .out file).

The PD1 encoding can be specified as an option of the 'fontenc' package or loaded here. It does not matter what font family is selected, as T_EX does not process it anyway. So use CM.

```

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

```

```

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

```

6.3.5 PU encoding

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

`\HyPsd@LoadUnicode` Because the file `puenc.def` takes a lot of memory, the loading is defined in the macro `\HyPsd@LoadUnicode` called by the package option `unicode`.

```

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

```

`\HyPsd@LoadExtra`

```

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

```

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.

```

886 \def\texorpdfstring{%
887   \ifHy@pdfstring

```

```

888   \expandafter\@secondoftwo
889   \else
890   \expandafter\@firstoftwo
891   \fi
892 }

```

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`.

```

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

```

`\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`.

```

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

```

`\HyPsd@DisableCommands`

```

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

```

`\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`.

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

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.

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

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

```
922 <*/package>
```

6.5.3 CJK patch

```
923 \RequirePackage{intcalc}[2007/09/27]
\HyPsd@CJKhook
924 \def\HyPsd@CJKhook{%
925   \ltx@ifpackageloaded{CJK}{%
926     \let\CJK@kern\relax
927     \let\CJKkern\relax
928     \let\CJK@CJK\relax
929     \ifHy@CJKbookmarks
930       \HyPsd@CJKhook@bookmarks
931     \fi
932     \HyPsd@CJKhook@unicode
933   }-}%
934 }
```

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 ($\geq 0x40$).

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

```

```

961 }%
962 }%
963 \toks@\expandafter{\the\toks@ !}%
964 \xdef\HyPsd@CJKhook@bookmarks{%
965   \the\toks@
966 }%
967 \endgroup

```

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

```

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

```

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

```

976 \def\HyPsd@DecimalToOctal#1{%
977   \ifcase #1 %
978     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
979     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
980     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
981     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
982     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
983     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
984     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
985     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
986     \or @\or A\or B\or C\or D\or E\or F\or G%
987     \or H\or I\or J\or K\or L\or M\or N\or O%
988     \or P\or Q\or R\or S\or T\or U\or V\or W%
989     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
990     \or \140\or a\or b\or c\or d\or e\or f\or g%
991     \or h\or i\or j\or k\or l\or m\or n\or o%
992     \or p\or q\or r\or s\or t\or u\or v\or w%
993     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
994     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
995     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
996     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
997     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
998     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
999     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1000    \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1001    \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1002    \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1003    \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1004    \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1005    \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1006    \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1007    \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1008    \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1009    \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%

```

```
1010 \fi
1011 }
```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```
1012 \def\HyPsd@CJKhook@unicode{%
1013 \let\Unicode\HyPsd@CJK@Unicode
1014 \let\CJKnumber\HyPsd@CJKnumber
1015 \let\CJKdigits\HyPsd@CJKdigits
1016 }
```

\HyPsd@CJK@Unicode

```
1017 \def\HyPsd@CJK@Unicode#1#2{%
1018 \ifnum#1<256 %
1019 \HyPsd@DecimalToOctalFirst{#1}%
1020 \HyPsd@DecimalToOctalSecond{#2}%
1021 \else
1022 \933%
1023 \expandafter\expandafter\expandafter\HyPsd@HighA
1024 \intcalcDiv{#1}{4}!%
1025 \933%
1026 \ifcase\intcalcMod{#1}{4} %
1027 4\or 5\or 6\or 7%
1028 \fi
1029 \HyPsd@DecimalToOctalSecond{#2}%
1030 \fi
1031 }

1032 \def\HyPsd@HighA#1!{%
1033 \expandafter\expandafter\expandafter\HyPsd@HighB
1034 \IntCalcDiv#1!64!!%
1035 \expandafter\expandafter\expandafter\HyPsd@HighD
1036 \IntCalcMod#1!64!!%
1037 }
1038 \def\HyPsd@HighB#1!{%
1039 \expandafter\expandafter\expandafter\HyPsd@HighC
1040 \IntCalcDec#1!!%
1041 }
1042 \def\HyPsd@HighC#1!{%
1043 \IntCalcDiv#1!4!%
1044 \@backslashchar
1045 \IntCalcMod#1!4!%
1046 }
1047 \def\HyPsd@HighD#1!{%
1048 \ifcase\IntCalcDiv#1!8! %
1049 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1050 \fi
1051 \ifcase\IntCalcMod#1!8! %
1052 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1053 \fi
1054 }
1055 \def\HyPsd@DecimalToOctalFirst#1{%
1056 \9%
```

```

1057 \ifcase#1 %
1058     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1059     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1060     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1061     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1062     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1063     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1064     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1065     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1066     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1067     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1068     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1069     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1070     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1071     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1072     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1073     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1074     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1075     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1076     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1077     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1078     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1079     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1080     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1081     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1082     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1083     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1084     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1085     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1086     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1087     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1088     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1089     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1090 \fi
1091 }
1092 \def\HyPsd@DecimalToOctalSecond#1{%
1093     \ifcase #1 %
1094         \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1095         \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1096         \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1097         \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1098         \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1099         \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1100         \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1101         \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1102         \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1103         \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1104         \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1105         \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1106         \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1107         \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1108         \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1109         \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1110         \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%

```



```

1111 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1112 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1113 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1114 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1115 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1116 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1117 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1118 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1119 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1120 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1121 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1122 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1123 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1124 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1125 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1126 \fi
1127 }

1128 \def\HyPsd@CJKnumber#1{%
1129 \ifnum#1<\z@
1130 \CJK@minus
1131 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1132 \else
1133 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1134 \fi
1135 }

1136 \def\HyPsd@@CJKnumber#1{%
1137 \ifcase#1 %
1138 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1139 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1140 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1141 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1142 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1143 \CJK@ten\CJK@nine
1144 \else
1145 \ifnum#1<10000 %
1146 \HyPsd@CJKnumberFour#1!\@empty{20}%
1147 \@empty
1148 \else
1149 \ifnum#1<100000000 %
1150 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1151 \IntCalcDiv#1!10000!%
1152 !}{20}%
1153 \CJK@tenthousand
1154 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1155 \IntCalcMod#1!10000!%
1156 !\CJK@zero{10}%
1157 \@empty
1158 \else
1159 \expandafter\HyPsd@CJKnumberLarge
1160 \number\IntCalcDiv#1!100000000!\expandafter!%
1161 \number\IntCalcMod#1!100000000!!%
1162 \fi
1163 \fi
1164 \fi

```

```

1165 }
1166 \def\HyPsd@CJKnumberLarge#1!#2!{%
1167 \HyPsd@CJKnumberFour#1!{#20}%
1168 \CJK@hundredmillion
1169 \ifnum#2=\z@
1170 \else
1171 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1172 \IntCalcDiv#2!10000!%
1173 !\CJK@zero{10}%
1174 \CJK@tenthousand
1175 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1176 \IntCalcMod#2!10000!%
1177 !\CJK@zero{10}%
1178 \@empty
1179 \fi
1180 }
1181 \def\HyPsd@CJKnumberFour#1!#2#3{%
1182 \ifnum#1=\z@
1183 \expandafter\@gobble
1184 \else
1185 \ifnum#1<1000 %
1186 #2%
1187 \HyPsd@CJKnumberThree#1!{#3}%
1188 \else
1189 \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1190 \CJK@thousand
1191 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1192 \IntCalcMod#1!1000!%
1193 !\CJK@zero{10}%
1194 \fi
1195 \fi
1196 }
1197 \def\HyPsd@CJKnumberThree#1!#2#3{%
1198 \ifnum#1=\z@
1199 \else
1200 \ifnum#1<100 %
1201 #2%
1202 \HyPsd@CJKnumberTwo#1!{#3}%
1203 \else
1204 \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1205 \CJK@hundred
1206 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1207 \IntCalcMod#1!100!%
1208 !\CJK@zero{10}%
1209 \fi
1210 \fi
1211 }
1212 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1213 \ifnum#1=\z@
1214 \else
1215 \ifnum#1<#3 %
1216 #2%
1217 \HyPsd@@CJKnumber{#1}%
1218 \else

```

```

1219 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1220 \CJK@ten
1221 \ifnum\IntCalcMod#1!10!=\z@
1222 \else
1223 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1224 \fi
1225 \fi
1226 \fi
1227 }

1228 \def\HyPsd@CJKdigits#1{%
1229 \ifx*#1\relax
1230 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1231 \else
1232 \HyPsd@@CJKdigits\CJK@null{#1}%
1233 \fi
1234 }

1235 \def\HyPsd@@CJKdigits#1#2{%
1236 \ifx\#2\%
1237 \else
1238 \HyPsd@@@CJKdigits#1#2\@nil
1239 \fi
1240 }%

1241 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1242 \HyPsd@CJKdigit#1{#2}%
1243 \ifx\#3\%
1244 \expandafter\@gobble
1245 \else
1246 \expandafter\@firstofone
1247 \fi
1248 }%
1249 \HyPsd@@@CJKdigits#1#3\@nil
1250 }%
1251 }

1252 \def\HyPsd@CJKdigit#1#2{%
1253 \ifcase#2 %
1254 #1\or
1255 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1256 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1257 \fi
1258 }

```

6.5.6 \@inmathwarn-Patch

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

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

```
\def\@current@cmd#1{%
```

```

\ifx\protect\@typeset@protect
  \@inmathwarn#1%
\else
  \noexpand#1\expandafter\@gobble
\fi}
\def\@changed@cmd#1#2{%
\ifx\protect\@typeset@protect
  \@inmathwarn#1%
  \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
    \expandafter\ifx\csname?\string#1\endcsname\relax
      \expandafter\def\csname?\string#1\endcsname{%
        \TextSymbolUnavailable#1%
      }%
    \fi
    \global\expandafter\let
      \csname\cf@encoding\string#1\endcsname\expandafter\endcsname
      \csname?\string#1\endcsname
    \fi
    \csname\cf@encoding\string#1%
      \expandafter\endcsname
  \else
    \noexpand#1%
  \fi}
\gdef\TextSymbolUnavailable#1{%
  \@latex@error{%
    Command \protect#1 unavailable in encoding \cf@encoding%
  }\@eha}
\def\@inmathwarn#1{%
  \ifmmode
    \@latex@warning{Command \protect#1 invalid in math mode}%
  \fi}

1259 \def\HyPsd@inmathwarn#1#2{%
1260   \ifx#2\expandafter
1261     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1262       \HyPsd@GLYPHERR
1263       \expandafter\@gobble\string#1%
1264       >%
1265       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1266       \else
1267         \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1268         \fi
1269       \else
1270         \expandafter#2%
1271       \fi
1272 }
1273 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1274 \def\HyPsd@EndWithElse#1\else\else}

\HyPsd@add@accent

1275 \def\HyPsd@add@accent#1#2{%
1276   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1277   #2%
1278 }%

```

6.5.7 Unexpandable spaces

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

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

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

```
1279 \def\HyPsd@LetUnexpandableSpace#1{%
1280   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1281 }
```

`\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.

```
1282 \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.

```
1283 \edef\HyPsd@XSPACE{\string#\string X}
1284 \edef\HyPsd@ITALCORR{\string#\string I}
1285 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1286 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1287 \def\HyPsd@@hspace#1*#2\END{%
1288   \ifx\#2\%
1289     \HyPsd@hspacetest{#1}%
1290   \else
1291     \expandafter\HyPsd@hspacetest
1292   \fi
1293 }
```

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

```
1294 \def\HyPsd@hspacetest#1{\ifdim\dimexpr#1\relax>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1295 \ltx@ifundefined{tocsection}{%
1296   \let\HyPsd@AMSclassfix\relax
1297 }{%
1298   \def\HyPsd@AMSclassfix{%
```

```

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

```

6.5.11 Reference commands

`\HyPsd@href`

```
1312 \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.

```
1313 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```

1314 \def\HyPsd@@ref#1*#2\END{%
1315 \ifx\#2\%
1316 \HyPsd@@@ref{#1}%
1317 \else
1318 \expandafter\HyPsd@@@ref
1319 \fi
1320 }%

```

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

```

1321 \def\HyPsd@@@ref#1{%
1322 \expandafter\ifx\csname r@#1\endcsname\relax
1323 ??%
1324 \else
1325 \expandafter\expandafter\expandafter
1326 \@car\csname r@#1\endcsname\@nil
1327 \fi
1328 }

```

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

```
1329 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

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

```

1330 \def\HyPsd@@pageref#1*#2\END{%
1331 \ifx\#2\%
1332 \HyPsd@@@pageref{#1}%
1333 \else
1334 \expandafter\HyPsd@@@pageref
1335 \fi
1336 }

```

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

```
1337 \def\HyPsd@@@pageref#1{%
1338   \expandafter\ifx\csname r@#1\endcsname\relax
1339     ??%
1340   \else
1341     \expandafter\expandafter\expandafter\expandafter
1342     \expandafter\expandafter\expandafter\@car
1343     \expandafter\expandafter\expandafter\@gobble
1344     \csname r@#1\endcsname{}\@nil
1345   \fi
1346 }
```

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

```
1347 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

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

```
1348 \def\HyPsd@@nameref#1*#2\END{%
1349   \ifx\#2\%
1350     \HyPsd@@@nameref{#1}%
1351   \else
1352     \expandafter\HyPsd@@@nameref
1353   \fi
1354 }
```

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

```
1355 \def\HyPsd@@@nameref#1{%
1356   \expandafter\ifx\csname r@#1\endcsname\relax
1357     ??%
1358   \else
1359     \expandafter\expandafter\expandafter\expandafter
1360     \expandafter\expandafter\expandafter\@car
1361     \expandafter\expandafter\expandafter\@gobbletwo
1362     \csname r@#1\endcsname{}\@nil
1363   \fi
1364 }
```

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

```
1365 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1366 \def\HyPsd@@autoref#1*#2\END{%
1367   \ifx\#2\%
1368     \HyPsd@@@autoref{#1}%
1369   \else
1370     \expandafter\HyPsd@@@autoref
1371   \fi
1372 }
```

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

```
1373 \def\HyPsd@@@autoref#1{%
1374   \expandafter\ifx\csname r@#1\endcsname\relax
```

```

1375  ??%
1376  \else
1377  \expandafter\expandafter\expandafter\HyPsd@autorefname
1378    \csname r@#1\endcsname{-}{-}{-}\@nil
1379  \expandafter\expandafter\expandafter
1380  \@car\csname r@#1\endcsname\@nil
1381  \fi
1382  }

```

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

```

1383 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1384 \ifx\#4\%
1385 \else
1386 \HyPsd@@autorefname#4.\@nil
1387 \fi
1388 }

```

`\HyPsd@@autorefname`

```

1389 \def\HyPsd@@autorefname#1.#2\@nil{%
1390 \ltx@ifundefined{#1autorefname}{%
1391 \ltx@ifundefined{#1name}{%
1392 }{%
1393 \csname#1name\endcsname\space
1394 }%
1395 }{%
1396 \csname#1autorefname\endcsname\space
1397 }%
1398 }

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

```

\HyPsd@DefCommand
\HyPsd@LetCommand 1399 \begingroup
1400 \def\x#1#2{%
1401 \endgroup
1402 \let#1\def
1403 \def\HyPsd@DefCommand##1##2###{%
1404 #1%
1405 \expandafter\noexpand
1406 \csname\expandafter\@gobble\string##1\@empty\endcsname
1407 \@gobble
1408 }%
1409 \let#2\let
1410 \def\HyPsd@LetCommand##1{%
1411 \expandafter\ifx\csname##1\expandafter\endcsname
1412 \csname iftrue\endcsname
1413 \pdfstringdefWarn\let
1414 \expandafter\@gobble
1415 \else
1416 \expandafter\ifx\csname##1\expandafter\endcsname
1417 \csname iffalse\endcsname
1418 \pdfstringdefWarn\let
1419 \expandafter\expandafter\expandafter\@gobble
1420 \else
1421 #2%
1422 \expandafter\noexpand
1423 \csname##1\expandafter\expandafter\expandafter\endcsname
1424 \fi
1425 \fi
1426 }%
1427 }%
1428 \expandafter\x\csname <def>-command\expandafter\endcsname
1429 \csname <let>-command\endcsname
1430 \def\HyPsd@LetCommand#1{%
1431 \expandafter\expandafter\expandafter\HyPsd@LetCommand
1432 \expandafter\expandafter\expandafter{%
1433 \expandafter\@gobble\string#1\@empty
1434 }%
1435 }

```

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).

```

1436 \def\HyPsd@ifnextchar#1{%
1437   \pdfstringdefWarn#1%
1438   \expandafter\@gobbletwo\@gobble
1439 }

```

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`.

```

1440 \def\HyPsd@protected@testopt#1{%
1441   \pdfstringdefWarn#1%
1442   \@gobbletwo
1443 }

```

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:

```

1444 \def\HyPsd@Warning#1{%
1445   \begingroup
1446   \let\space\ltx@space
1447   \Hy@Warning{#1}%
1448   \endgroup
1449 }

```

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`.

```

1450 \let\HyPsd@fi\fi
1451 \def\HyPsd@ProtectSpaces#1{%
1452   \xdef#1{%
1453     \iftrue
1454       \expandafter\HyPsd@@ProtectSpacesFi
1455       \expandafter|\expandafter\@empty#1| %
1456     \HyPsd@fi
1457   }%
1458   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1459 }%

```

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

```

1460 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1461   \fi
1462   \unexpanded{#1}%
1463   \ifx\scrollmode#2\scrollmode
1464   \else
1465     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1466   \HyPsd@fi
1467 }%
```

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.

```

1468 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1469   \xdef#2{\unexpanded\expandafter{#1}}%
1470 }%
```

6.6.3 Remove grouping braces

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

```

1471 \def\HyPsd@RemoveBraces#1{%
1472   \ifx\scrollmode#1\scrollmode
1473   \else
1474     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1475   \fi
1476 }
```

`\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`.

```

1477 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1478   \fi
1479   \def\Hy@temp@A{#1#2}%
1480   \def\Hy@temp@B{#3}%
1481   \ifx\Hy@temp@A\Hy@temp@B
1482     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1483       \HyPsd@String#1%
1484     }%
1485   \ifx\scrollmode#2\scrollmode
1486   \else
1487     \Hy@ReturnAfterFiFiEnd{%
```

```

1488     \HyPsd@RemoveBraces{#2}%
1489   }%
1490   \fi
1491 \else
1492   \def\Hy@temp@A{#1}%
1493   \HyPsd@AppendItalcrr\HyPsd@String
1494   \ifx\Hy@temp@A\@empty
1495     \Hy@ReturnAfterElseFiFiEnd{%
1496       \HyPsd@RemoveBraces{#2}%
1497     }%
1498   \else
1499     \HyPsd@ProtectSpaces\Hy@temp@A
1500     \HyPsd@AppendItalcrr\Hy@temp@A
1501     \Hy@ReturnAfterFiFiEnd{%
1502       \expandafter\HyPsd@RemoveBraces\expandafter
1503         {\Hy@temp@A#2}%
1504     }%
1505   \fi
1506 \fi
1507 \Hy@ReturnEnd
1508 }

```

`\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`.

```

1509 \def\HyPsd@AppendItalcrr#1{%
1510   \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1%
1511 }
1512 \def\HyPsd@@AppendItalcrr#1#2{%
1513   \expandafter\def\expandafter#2\expandafter{#2#1}%
1514 }

```

6.6.4 Catcode check

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

```

1515 \ltx@ifundefined{directlua}{%
1516 }{%
1517   \expandafter\ifx\curname\endcurname\relax\fi
1518 }

```

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.

```

1519 \begingroup
1520 \catcode`\Q=\active
1521 \let Q\ltx@empty
1522 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1523 \global\let\HyPsd@Rest\relax
1524 \ifcat\relax\noexpand#1\relax
1525 \ifx#1\protect
1526 \else
1527 \ifx#1\penalty
1528 \setbox\z@=\hbox{%
1529 \afterassignment\HyPsd@AfterCountRemove
1530 \count@=#2\HyPsd@End
1531 }%
1532 \else
1533 \ifx#1\kern
1534 \setbox\z@=\hbox{%
1535 \afterassignment\HyPsd@AfterDimenRemove
1536 \dimen@=#2\HyPsd@End
1537 }%
1538 \else
1539 \ifx#1\hskip
1540 \setbox\z@=\hbox{%
1541 \afterassignment\HyPsd@AfterSkipRemove
1542 \skip@=#2\HyPsd@End
1543 }%
1544 \else
1545 \HyPsd@CatcodeWarning{#1}%
1546 \fi
1547 \fi
1548 \fi
1549 \fi
1550 \else
1551 \ifcat\noexpand#1\noexpandQ% active character
1552 \expandafter\expandafter\expandafter\def
1553 \expandafter\expandafter\expandafter\HyPsd@String
1554 \expandafter\expandafter\expandafter{%
1555 \expandafter\HyPsd@String\string#1%
1556 }%
1557 \else
1558 \ifcat#1A% letter
1559 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1560 \HyPsd@String#1%
1561 }%
1562 \else
1563 \ifcat#1 % SPACE
1564 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1565 \HyPsd@String\HyPsd@SPACEOPTI
1566 }%
1567 \else
1568 \ifcat$#1%
1569 \HyPsd@CatcodeWarning{math shift}%

```

```

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

```

Remove counts, dimens, skips.

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

```

1609 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1610 \gdef\HyPsd@Rest{#1}%
1611 }

```

`\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.

```

1612 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1613 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@\fi>1ex %

```

```

1614 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1615 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1616 \else
1617 \ifdim\dimen@=\z@
1618 \else
1619 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1620 \fi
1621 \gdef\HyPsd@Rest{#1}%
1622 \fi
1623 }

```

`\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).

```

1624 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1625 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>lex %
1626 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1627 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1628 \else
1629 \ifdim\skip@=\z@
1630 \else
1631 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1632 \fi
1633 \gdef\HyPsd@Rest{#1}%
1634 \fi
1635 }

```

Catcode warnings.

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

```

1636 \def\HyPsd@CatcodeWarning#1{%
1637 \HyPsd@Warning{%
1638 Token not allowed in a PDF string (%
1639 \ifHy@unicode
1640 Unicode%
1641 \else
1642 PDFDocEncoding%
1643 \fi
1644 ):%
1645 \MessageBreak removing `\'HyPsd@RemoveCmdPrefix#1'%
1646 }%
1647 }
1648 \begingroup
1649 \catcode`\|=0 %
1650 \catcode`\|=12 %
1651 |gdef|HyPsd@RemoveCmdPrefix#1{%
1652 |expandafter|HyPsd@@RemoveCmdPrefix
1653 |string#1|@empty\<-|@empty|@empty
1654 }%
1655 |gdef|HyPsd@@RemoveCmdPrefix#1\<-#2|@empty#3|@empty{#1#2}%
1656 |endgroup

```

`\HyPsd@RemoveSpaceWarning`

```

1657 \def\HyPsd@RemoveSpaceWarning#1{%
1658 \HyPsd@Warning{%

```

```

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

```

\HyPsd@ReplaceSpaceWarning

```

1670 \def\HyPsd@ReplaceSpaceWarning#1{%
1671 \HyPsd@Warning{%
1672 Token not allowed in a PDF string (%)
1673 \ifHy@unicode
1674 Unicode%
1675 \else
1676 PDFDocEncoding%
1677 \fi
1678 ):%
1679 \MessageBreak #1\MessageBreak
1680 replaced by space%
1681 }%
1682 }

```

6.6.5 Check for wrong glyphs

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

```

1683 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1684 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1685 \HyPsd@String#1%
1686 }%
1687 \ifx\#2\%
1688 \else
1689 \ltx@ReturnAfterFi{%
1690 \HyPsd@GlyphProcessWarning#2\@empty
1691 }%
1692 \fi
1693 }
1694 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1695 \HyPsd@@@GlyphProcessWarning#1++>%
1696 \HyPsd@GlyphProcess#2\@empty
1697 }
1698 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
1699 \ifx\#2\%
1700 \HyPsd@Warning{%
1701 Glyph not defined in %
1702 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1703 removing \@backslashchar#1'%
1704 }%
1705 \else

```



```

1706 \HyPsd@Warning{%
1707   Composite letter ` \@backslashchar#1+#2'\MessageBreak
1708   not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1709   \MessageBreak
1710   removing ` \@backslashchar#1'%
1711 }%
1712 \fi
1713 }

```

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`.

```

1714 \def\HyPsd@spaceopti#1{ % first space
1715   \ifx\HyPsd@spaceopti#1%
1716     \040%
1717   \else
1718     #1%
1719   \fi
1720 }%

```

6.6.6 Replacing tokens

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

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

```

1721 \def\HyPsd@Subst#1#2#3{%
1722   \def\HyPsd@@@ReplaceFi##1##2\END\fi{%
1723     \fi
1724     ##1%
1725     \ifx\scrollmode##2\scrollmode
1726     \else
1727       #2%
1728     \HyPsd@@@ReplaceFi##2\END
1729     \fi
1730   }%
1731 \xdef#3{%
1732   \iftrue
1733     \expandafter\HyPsd@@@ReplaceFi#3#1\END
1734   \fi
1735 }%
1736 }

```

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

```

1737 \def\HyPsd@StringSubst#1{%
1738   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1739 }

```

`\HyPsd@EscapeTeX`

```
1740 \begingroup
1741 \lccode`!=`%%
1742 \lccode`|=`\\%
1743 \lccode`\<(=`{\%
1744 \lccode`\)=`}%
1745 \lccode`0=\ltx@zero
1746 \lccode`1=\ltx@zero
1747 \lccode`3=\ltx@zero
1748 \lccode`4=\ltx@zero
1749 \lccode`5=\ltx@zero
1750 \lccode`7=\ltx@zero
1751 \lowercase{\endgroup
1752 \def\HyPsd@EscapeTeX#1{%
1753   \HyPsd@Subst!{|045}#1%
1754   \HyPsd@Subst({|173}#1%
1755   \HyPsd@Subst){|175}#1%
1756 }%
1757 }
```

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.

```
1758 \def\HyPsd@doxspace#1{%
1759   \ifx#1\relax\else
1760     \ifx#1.\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                       \HyPsd@SPACEOPTI
1770                     \fi
1771                   \fi
1772                 \fi
1773               \fi
1774             \fi
1775           \fi
1776         \fi
1777       \fi
1778     \fi
1779   \fi
1780   #1%
1781 }
```

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.

```
1782 \begingroup
1783 \catcode`\|=0 %
1784 \catcode`\|=12 %
```

\HyPsd@ConvertToUnicode

```
1785 |gdef|HyPsd@ConvertToUnicode#1{%
1786 |xdef#1{%
1787 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1788 }%
1789 |ifx#1|@empty
1790 |else
1791 |xdef#1{%
1792 \376\377%
1793 #1%
1794 }%
1795 |fi
1796 }%
```

\HyPsd@DoConvert

```
1797 |gdef|HyPsd@DoConvert#1{%
1798 |ifx#1|@empty
1799 |else
1800 |ltx@ReturnAfterFi{%
1801 |ifx#1\%%
1802 \%%
1803 |expandafter|HyPsd@DoEscape
1804 |else
1805 |HyPsd@Char{#1}%
1806 |expandafter|HyPsd@DoConvert
1807 |fi
1808 }%
1809 |fi
1810 }%
```

\HyPsd@DoEscape

```
1811 |gdef|HyPsd@DoEscape#1{%
1812 |ifx#19%
1813 |expandafter|HyPsd@GetTwoBytes
1814 |else
1815 |ltx@ReturnAfterFi{%
1816 |ifx#18%
1817 00%
1818 |expandafter|HyPsd@GetTwoBytes
1819 |else
1820 #1%
1821 |expandafter|HyPsd@GetOneByte
1822 |fi
1823 }%
1824 |fi
```

1825 }%

\HyPsd@GetTwoBytes

1826 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1827 #1\#2#3#4%
1828 |HyPsd@DoConvert
1829 }%

\HyPsd@GetOneByte

1830 |gdef|HyPsd@GetOneByte#1#2{%
1831 #1#2%
1832 |HyPsd@DoConvert
1833 }%
1834 |endgroup

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

1835 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1836 \xdef#4{#4#1#2}%
1837 \HyPsd@@ConvertToUnicode#3\END#4%
1838 }

\HyPsd@Char

1839 \begingroup
1840 \catcode0=9 %
1841 \catcode\^=7 %
1842 \catcode\^^=12 %
1843 \def\x{^^^0000}%
1844 \expandafter\endgroup
1845 \ifx\x\@empty
1846 \def\HyPsd@Char#1{%
1847 \ifnum`#1<128 %
1848 \@backslashchar 000#1%
1849 \else
1850 \ifnum`#1<65536 %
1851 \expandafter\HyPsd@CharTwoByte\number`#1!%
1852 \else
1853 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1854 \intcalcSub{`#1}{65536}!%
1855 \fi
1856 \fi
1857 }%
1858 \def\HyPsd@CharTwoByte#1!{%
1859 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1860 \IntCalcDiv#1!256!!%
1861 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1862 \IntCalcMod#1!256!!%
1863 }%
1864 \def\HyPsd@CharOctByte#1!{%
1865 \@backslashchar
1866 \IntCalcDiv#1!64!%
1867 \intcalcDiv{\IntCalcMod#1!64!}{8}%
1868 \IntCalcMod#1!8!%
1869 }%

```

1870 \def\HyPsd@CharSurrogate#1!{%
1871 \@backslashchar 33%
1872 \IntCalcDiv#1!262144!%
1873 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1874 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1875 \@backslashchar 33%
1876 \expandafter\expandafter\expandafter\IntCalcAdd
1877 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1878 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1879 \IntCalcMod#1!256!!%
1880 }%
1881 \else
1882 \def\HyPsd@Char#1{%
1883 \@backslashchar 000#1%
1884 }%
1885 \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.

```

1886 \ifcsname UTFviii@loop\endcsname
1887 \def\HyPsd@expand@utfvii{%
1888 \count@"C2
1889 \@tempcnta"F5
1890 \def\UTFviii@tmp{\expandafter\def\expandafter~\expandafter{~}}%
1891 \UTFviii@loop
1892 }
1893 \else
1894 \def\HyPsd@expand@utfvii{}
1895 \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`

```

1896 \begingroup
1897 \lccode`~=`^^f4\relax
1898 \lowercase{\endgroup
1899 \def\HyPsd@UTFviii{%
1900 \HyPsd@expand@utfvii
1901 \let\UTFviii@two@octets\HyPsd@UTFviii@two
1902 \let\UTFviii@three@octets\HyPsd@UTFviii@three
1903 \let\UTFviii@four@octets\HyPsd@UTFviii@four
1904 \ifx~\HyPsd@UTFviii@ccxliv@undef
1905 \let~\HyPsd@UTFviii@ccxliv@def

```

```

1906 \fi
1907 \let\unicar\HyPsd@unicar
1908 }%
1909 }%
1910 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1911 \edef\HyPsd@UTFviii@ccxliv@def{%
1912 \noexpand\UTFviii@four@octets\string ^^f4%
1913 }%

```

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

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

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

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

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

$$(5)$$

```

1914 \def\HyPsd@UTFviii@two#1#2{%
1915 \expandafter\HyPsd@UTFviii@two
1916 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
1917 \number`#1\expandafter|
1918 \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter|
1919 \number`#2 \@nil
1920 }%
1921 \def\HyPsd@UTFviii@two#1|#2|#3|#4\@nil{%
1922 \expandafter\8%
1923 \number\numexpr #1-48\expandafter\relax
1924 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1925 \number\numexpr #3-8*%
1926 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1927 \number\numexpr #4-8*#3\relax
1928 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

1929 \def\HyPsd@UTFviii@three#1#2#3{%
1930 \expandafter\HyPsd@UTFviii@three
1931 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
1932 \number`#1\expandafter|
1933 \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter|
1934 \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|

```

```

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

```

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

```

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

```

```

1948 \def\HyPsd@UTFviii@four#1#2{%
1949 \expandafter\HyPsd@@UTFviii@four\number
1950 \numexpr-1+(`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
1951 \expandafter|\number
1952 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp| %
1953 }%
1954 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1955 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1956 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1957 \ifodd#2 %
1958 \number\numexpr(#2-1)/2\relax
1959 \else
1960 \number\numexpr#2/2\relax
1961 \fi
1962 \number\numexpr\ifodd#2 4+\fi
1963 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
1964 \933%
1965 \expandafter\HyPsd@@@UTFviii@four\number
1966 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
1967 }%
1968 \def\HyPsd@@@UTFviii@four#1|#2{%
1969 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1970 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1971 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
1972 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
1973 }%

```

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

```

1974 \def\HyPsd@unichar#1{%
1975 \ifHy@unicode
1976 \ifnum#1>"10FFFF %
1977 \HyPsd@UnicodeReplacementCharacter % illegal

```

```

1978     \else
1979     \ifnum#1>"FFFF %
High-surrogate code point. ("D800 = 55296, \p@ = 1pt = 65536sp)
1980     \expandafter\HyPsd@unichar\expandafter{%
1981     \number\numexpr 55296+%
1982     \dimexpr.0009765625\dimexpr\number#1sp-\p@
1983     \relax\relax\relax
1984     }%
Low-surrogate code point. ("DC00 = 56320, "DC00 - 65536 = -9216)
1985     \expandafter\HyPsd@unichar\expandafter{%
1986     \number\numexpr#1-9216%
1987     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1988     \relax\relax\relax
1989     }%
1990     \else
1991     \ifnum#1>"7FF %
1992     \9%
1993     \expandafter\HyPsd@unichar@first@byte\expandafter{%
1994     \number
1995     \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1996     }%
1997     \else
1998     \8%
1999     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2000     \fi
2001     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2002     \number
2003     \numexpr#1-256*\number
2004     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2005     }%
2006     \fi
2007     \fi
2008     \else
2009     .% unsupported (Unicode -> PDF Doc Encoding)
2010     \fi
2011     }%
2012     \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2013     \def\HyPsd@unichar@first@byte#1{%
2014     \number\dimexpr.015625\dimexpr#1sp\relax\relax
2015     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2016     \number
2017     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2018     \relax\relax\relax
2019     }%
2020     }%
2021     \def\HyPsd@unichar@second@byte#1{%
2022     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2023     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2024     \number
2025     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2026     \relax\relax\relax
2027     }%
2028     }%

```



```

2029 \def\HyPsd@unichar@octtwo#1{%
2030 \number\dimexpr.125\dimexpr#1sp\relax\relax
2031 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2032 \relax\relax\relax
2033 }%

```

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

```

2034 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2035 \ifx@gobble#1%
2036 \else
2037 [Please insert \textbackslash PrerenderUnicode%
2038 \textbraceleft#1\textbraceright\space
2039 into preamble]%
2040 \fi
2041 }%

```

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

`\HyPsd@DieFace` Die faces are provided by

Package	Macro
ifsym	<code>\Cube</code>
epsdice	<code>\epsdice</code>
hhcount	<code>\fcdice</code>

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

```

2042 \def\HyPsd@DieFace#1{%
2043 \ifHy@unicode
2044 \ifnum#1<1 %
2045 \HyPsd@UnicodeReplacementCharacter
2046 \else
2047 \ifnum#1>6 %
2048 \9046\205%
2049 \expandafter\expandafter\expandafter
2050 \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2051 \else
2052 \9046\20\intcalcDec{#1}%
2053 \fi
2054 \fi
2055 \else
2056 .% Die faces are not part of PDFDocEncoding
2057 \fi
2058 }

```

`\HyPsd@DieFaceLarge`

```

2059 \def\HyPsd@DieFaceLarge#1!{%
2060 \ifnum#1>6 %
2061 \expandafter\ltx@firstoftwo
2062 \else
2063 \expandafter\ltx@secondoftwo
2064 \fi
2065 }%

```

```

2066 \9046\205%
2067 \expandafter\expandafter\expandafter
2068 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2069 }{%
2070 \9046\20\IntCalcDec#1!%
2071 }%
2072 }

```

6.6.11 Support for moon phases of package china2e

```

2073 \def\HyPsd@MoonPha#1{%
2074 \ifcase\intcalcNum{#1} %
2075 \HyPsd@UnicodeReplacementCharacter
2076 \or % 1
2077 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2078 \9330\074\9337\032%
2079 \or % 2
2080 \HyPsd@UnicodeReplacementCharacter
2081 \or % 3
2082 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2083 \9330\074\9337\035%
2084 \or % 4
2085 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2086 \9330\074\9337\034%
2087 \else
2088 \HyPsd@UnicodeReplacementCharacter
2089 \fi
2090 }
2091 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2092 \def\HyPsd@ding#1{%
2093 \ifHy@unicode
2094 \ifnum#1<32 %
2095 \HyPsd@UnicodeReplacementCharacter
2096 \else
2097 \ifnum#1>254 %
2098 \HyPsd@UnicodeReplacementCharacter
2099 \else
2100 \ifnum#1<127 %
2101 \expandafter\expandafter\expandafter
2102 \HyPsd@@ding\intcalcNum{#1}!%
2103 \else
2104 \ifnum#1>160 %
2105 \expandafter\expandafter\expandafter
2106 \HyPsd@@ding\intcalcNum{#1}!%
2107 \else
2108 \HyPsd@UnicodeReplacementCharacter
2109 \fi
2110 \fi
2111 \fi
2112 \fi
2113 \else

```

```

2114 .% Dingbats are not part of PDFDocEncoding
2115 \fi
2116 }

```

\HyPsd@@ding

```

2117 \def\HyPsd@@ding#1!{%
2118 \ltx@ifundefined{HyPsd@ding@#1}{%
2119 \ifnum#1<127 %
2120 \9047%
2121 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2122 \else
2123 \ifnum#1<168 %
2124 \9047\14\IntCalcSub#1!160!%
2125 \else
2126 \ifnum#1>181 %
2127 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2128 \else
2129 % 172..181 -> U+2460..U+2469
2130 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2131 \fi
2132 \fi
2133 \fi
2134 }{%
2135 \csname HyPsd@ding@#1\endcsname
2136 }%
2137 }

```

```

2138 \@namedef{HyPsd@ding@32}{\space}
2139 % U+260E BLACK TELEPHONE
2140 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2141 % U+261B BLACK RIGHT POINTING INDEX
2142 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2143 % U+261E WHITE RIGHT POINTING INDEX
2144 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2145 % U+2605 BLACK STAR
2146 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2147 % U+25CF BLACK CIRCLE
2148 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2149 % U+25A0 BLACK SQUARE
2150 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2151 % U+25B2 BLACK UP-POINTING TRIANGLE
2152 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2153 % U+25BC BLACK DOWN-POINTING TRIANGLE
2154 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2155 % U+25C6 BLACK DIAMOND
2156 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2157 % U+25D7 RIGHT HALF BLACK CIRCLE
2158 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2159 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2160 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2161 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2162 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2163 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2164 \@namedef{HyPsd@ding@214}{\textleftarrow}%

```

```

2165 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2166 \@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.

```

2167 \@ifpackageloaded{subfigure}{%
2168   \ltx@ifundefined{sub@label}{%
2169     \Hy@hypertexnamesfalse
2170   }{%
2171     \renewcommand*{\sub@label}[1]{%
2172       \@bspack
2173       \subfig@oldlabel{#1}%
2174     \if@filesw
2175       \begingroup
2176         \edef\@currentlabstr{%
2177           \expandafter\strip@prefix\meaning\@currentlabelname
2178         }%
2179         \protected@write\@auxout{}{%
2180           \string\newlabel{sub@#1}{%
2181             {\@nameuse{@@thesub\@capttype}}%
2182             {\thepage}%
2183             {%
2184               \expandafter\strip@period\@currentlabstr
2185               \relax.\relax\@@@%
2186             }%
2187             {\@currentHref}%
2188             {}%
2189           }%
2190         }%
2191       \endgroup
2192     \fi
2193     \@espack
2194   }%
2195 }%
2196 }{}

```

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.

```

2197 \def\Hy@true{true}
2198 \def\Hy@false{false}

```

Providing dummy definitions.

```

2199 \let\literalps@out\@gobble
2200 \newcommand\pdfbookmark[3]{}
2201 \def\Acrobatmenu#1#2{\leavevmode#2}
2202 \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

```
2203 \let\HyperRaiseLinkHook\@empty
2204 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2205 \newcount\Hy@SavedSpaceFactor
2206 \def\Hy@SaveSpaceFactor{%
2207   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2208 }
2209 \def\Hy@RestoreSpaceFactor{%
2210   \relax
2211   \ifhmode
2212     \ifnum\Hy@SavedSpaceFactor>\z@
2213       \spacefactor=\Hy@SavedSpaceFactor
2214     \fi
2215   \fi
2216 }
2217 \def\Hy@SaveSavedSpaceFactor{%
2218   \edef\Hy@RestoreSavedSpaceFactor{%
2219     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2220   }%
2221 }
2222 \def\Hy@raisedlink#1{%
2223   \ifvmode
2224     #1%
2225   \else
2226     \Hy@SaveSpaceFactor
2227     \penalty\@M
2228     \smash{%
2229       \begingroup
2230         \let\HyperRaiseLinkLength\@tempdima
2231         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2232         \HyperRaiseLinkHook
2233       \expandafter\endgroup
2234       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2235         \Hy@RestoreSpaceFactor
2236         #1%
2237         \Hy@SaveSpaceFactor
2238       }%
2239     }%
2240   \Hy@RestoreSpaceFactor
```

```

2241 \fi
2242 }

```

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

```

\Hy@RestoreLastskip 2243 \def\Hy@SaveLastskip{%
2244 \let\Hy@RestoreLastskip\relax
2245 \ifvmode
2246 \ifdim\lastskip=\z@
2247 \ifnum\lastnodetype=1 %
2248 \let\Hy@RestoreLastskip\relax
2249 \else
2250 \let\Hy@RestoreLastskip\nobreak
2251 \fi
2252 \else
2253 \begingroup
2254 \skip@=-\lastskip
2255 \edef\x{%
2256 \endgroup
2257 \def\noexpand\Hy@RestoreLastskip{%
2258 \noexpand\ifvmode
2259 \noexpand\nobreak
2260 \vskip\the\skip@
2261 \vskip\the\lastskip\relax
2262 \noexpand\fi
2263 }%
2264 }%
2265 \x
2266 \fi
2267 \else
2268 \ifhmode
2269 \ifdim\lastskip=\z@
2270 \let\Hy@RestoreLastskip\nobreak
2271 \else
2272 \begingroup
2273 \skip@=-\lastskip
2274 \edef\x{%
2275 \endgroup
2276 \def\noexpand\Hy@RestoreLastskip{%
2277 \noexpand\ifhmode
2278 \noexpand\nobreak
2279 \hskip\the\skip@
2280 \hskip\the\lastskip\relax
2281 \noexpand\fi
2282 }%
2283 }%
2284 \x
2285 \fi
2286 \fi
2287 \fi
2288 }%

```

9 Options

```

2289 \SetupKeyvalOptions{%
2290   family=Hyp,%
2291   prefix=HyOpt%
2292 }

```

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 2293 \ExplSyntaxOn
2294 \@ifundefined{AddToDocumentProperties}
2295 {
2296   \prop_new:N \g__hyp_documentproperties_prop
2297   \NewDocumentCommand\AddToDocumentProperties{O{\currname}mm}
2298   {
2299     \exp_args:NNx
2300     \prop_gput:Nnn \g__hyp_documentproperties_prop
2301     {
2302       \tl_if_blank:eTF {#1}{top-level/}{#1/} #2
2303     }
2304     { #3}
2305   }
2306   \NewExpandableDocumentCommand\GetDocumentProperties{m}
2307   {
2308     \prop_item:Nn \g__hyp_documentproperties_prop {#1}
2309   }
2310 }{}
2311 \ExplSyntaxOff

\IfHyperBooleanExists

2312 \def\IfHyperBooleanExists#1{%
2313   \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2314     \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2315   }%
2316 }

2317 \@namedef{KV@Hyp@stoppearly@default}{}

\IfHyperBoolean

2318 \def\IfHyperBoolean#1{%
2319   \IfHyperBooleanExists{#1}{%
2320     \csname ifHy@#1\endcsname
2321     \expandafter\ltx@firstoftwo
2322   \else
2323     \expandafter\ltx@secondoftwo
2324   \fi
2325 } \ltx@secondoftwo
2326 }

\Hy@boolkey

2327 \def\Hy@boolkey#1#2{%

```

```

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

```

\Hy@WarnOptionValue

```

2349 \def\Hy@WarnOptionValue#1#2#3{%
2350 \Hy@Warning{%
2351 Unexpected value `#1'\MessageBreak
2352 of option `#2' instead of\MessageBreak
2353 #3%
2354 }%
2355 }

```

\Hy@DisableOption

```

2356 \def\Hy@DisableOption#1{%
2357 \ltx@ifundefined{KV@Hyp@#1@default}{%
2358 \define@key{Hyp}{#1}%
2359 }{%
2360 \define@key{Hyp}{#1}[]%
2361 }%
2362 {\Hy@WarnOptionDisabled{#1}}%
2363 }
2364

```

\Hy@WarnOptionDisabled

```

2365 \def\Hy@WarnOptionDisabled#1{%
2366 \Hy@Warning{%
2367 Option `#1' has already been used,\MessageBreak
2368 setting the option has no effect%
2369 }%
2370 }

```

\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.


```

2371 \def\Hy@CheckOptionValue#1#2#3{%
2372   \begingroup
2373   \edef\x{#1}%
2374   \@onelevel@sanitize\x
2375   \let\y=y%
2376   \def\do##1##2{%
2377     \def\z{##1}%
2378     \@onelevel@sanitize\z
2379     \ifx\x\z
2380       \let\y=n%
2381       \let\do\@gobbletwo
2382     \fi
2383   }%
2384   #3%
2385   \ifx\y y%
2386     \def\do##1##2{%
2387       * `##1'%
2388       \ifx\##2\\\else\space(##2)\fi
2389       \MessageBreak
2390     }%
2391     \Hy@Warning{%
2392       Values of option `##2':\MessageBreak
2393       #3%
2394       * An empty value disables the option.\MessageBreak
2395       Unknown value `x'%
2396     }%
2397   \fi
2398 \endgroup
2399 }

```

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

```

2400 \def\Hy@DefNameKey#1{%
2401   \expandafter\Hy@@@DefNameKey\csname @#1\endcsname{#1}%
2402 }

```

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

```

2403 \def\Hy@@@DefNameKey#1#2#3{%
2404   \define@key{Hyp}{#2}{%
2405     \edef#1{##1}%
2406     \ifx#1\@empty
2407       \else
2408         \Hy@CheckOptionValue{##1}{#2}{#3}%
2409       \fi
2410   }%
2411   \let#1\@empty
2412 }

```

\Hy@UseNameKey

```

2413 \def\Hy@UseNameKey#1#2{%

```

```

2414 \ifx#2\@empty
2415 \else
2416 /#1/#2%
2417 \fi
2418 }

```

9.2 Defining the options

```

2419 \define@key{Hyp}{implicit}[true]{%
2420 \Hy@boolkey{implicit}{#1}%
2421 }
2422 \define@key{Hyp}{draft}[true]{%
2423 \Hy@boolkey{draft}{#1}%
2424 }
2425 \define@key{Hyp}{final}[true]{%
2426 \Hy@boolkey{final}{#1}%
2427 }
2428 \let\KV@Hyp@nolinks\KV@Hyp@draft

2429 \def\Hy@ObsoletePaperOption#1{%
2430 \Hy@WarningNoLine{%
2431 Option `#1' is no longer used%
2432 }%
2433 \define@key{Hyp}{#1}[true]{}%
2434 }
2435 \def\Hy@temp#1{%
2436 \define@key{Hyp}{#1}[true]{%
2437 \Hy@ObsoletePaperOption{#1}%
2438 }%
2439 }
2440 \Hy@temp{a4paper}
2441 \Hy@temp{a5paper}
2442 \Hy@temp{b5paper}
2443 \Hy@temp{letterpaper}
2444 \Hy@temp{legalpaper}
2445 \Hy@temp{executivepaper}

2446 \define@key{Hyp}{setpagesize}[true]{%
2447 \Hy@boolkey{setpagesize}{#1}%
2448 }
2449 \define@key{Hyp}{debug}[true]{%
2450 \Hy@boolkey{debug}{#1}%
2451 }
2452 \define@key{Hyp}{linktocpage}[true]{%
2453 \Hy@boolkey{linktocpage}{#1}%
2454 \ifHy@linktocpage
2455 \let\Hy@linktoc\Hy@linktoc@page
2456 \else
2457 \let\Hy@linktoc\Hy@linktoc@section
2458 \fi
2459 }
2460 \chardef\Hy@linktoc@none=0 %
2461 \chardef\Hy@linktoc@section=1 %
2462 \chardef\Hy@linktoc@page=2 %
2463 \chardef\Hy@linktoc@all=3 %

```

```

2464 \ifHy@linktocpage
2465 \let\Hy@linktoc\Hy@linktoc@page
2466 \else
2467 \let\Hy@linktoc\Hy@linktoc@section
2468 \fi
2469 \define@key{Hyp}{linktoc}{%
2470 \@ifundefined{Hy@linktoc@#1}{%
2471 \Hy@Warning{%
2472 Unexpected value `#1' of\MessageBreak
2473 option `linktoc' instead of `none',\MessageBreak
2474 `section', `page' or `all'%
2475 }%
2476 }{%
2477 \expandafter\let\expandafter\Hy@linktoc
2478 \csname Hy@linktoc@#1\endcsname
2479 }%
2480 }
2481 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2482 \let\XR@ext\relax
2483 \define@key{Hyp}{verbose}[true]{%
2484 \Hy@boolkey{verbose}{#1}%
2485 }

```

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.

```

2486 \define@key{Hyp}{raiselinks}[true]{%
2487 \Hy@boolkey{raiselinks}{#1}%
2488 }

```

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

```

2489 \def\Hy@setbreaklinks#1{%
2490 \csname breaklinks#1\endcsname
2491 }
2492 \def\Hy@breaklinks@unsupported{%
2493 \ifx\Hy@setbreaklinks\@gobble
2494 \ifHy@breaklinks
2495 \Hy@WarningNoLine{%
2496 You have enabled option `breaklinks'.\MessageBreak
2497 But driver ``\Hy@driver.def' does not support this.\MessageBreak
2498 Expect trouble with the link areas of broken links%
2499 }%
2500 \fi
2501 \fi
2502 }
2503 \define@key{Hyp}{breaklinks}[true]{%
2504 \Hy@boolkey{breaklinks}{#1}%
2505 \let\Hy@setbreaklinks\@gobble
2506 }
2507 \define@key{Hyp}{localanchorname}[true]{%
2508 \Hy@WarningNoLine{%
2509 Option `localanchorname' is deprecated%
2510 }%

```

```

2511 \Hy@boolkey{localanchorname}{#1}%
2512 }

Determines whether an automatic anchor is put on each page
2513 \define@key{Hyp}{pageanchor}[true]{%
2514 \Hy@boolkey{pageanchor}{#1}%
2515 }

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.
2516 \define@key{Hyp}{plainpages}[true]{%
2517 \Hy@boolkey{plainpages}{#1}%
2518 }

Are the names for anchors made as per the HyperTeX system, or do they simply
use what LATEX provides?
2519 \define@key{Hyp}{naturalnames}[true]{%
2520 \Hy@boolkey{naturalnames}{#1}%
2521 }

Completely ignore the names as per the HyperTeX system, and use unique coun-
ters.
2522 \define@key{Hyp}{hypertexnames}[true]{%
2523 \Hy@boolkey{hypertexnames}{#1}%
2524 }

Currently, dvips doesn't allow anchors nested within targets, so this option tries
to stop that happening. Other processors may be able to cope.
2525 \define@key{Hyp}{nesting}[true]{%
2526 \Hy@boolkey{nesting}{#1}%
2527 }

2528 \define@key{Hyp}{destlabel}[true]{%
2529 \Hy@boolkey{destlabel}{#1}%
2530 }

2531 \define@key{Hyp}{unicode}[true]{%
2532 \Hy@boolkey{unicode}{#1}%
2533 \ifHy@unicode
2534 \def\HyPsd@pdfencoding{unicode}%
2535 \HyPsd@LoadUnicode
2536 \else
2537 \def\HyPsd@pdfencoding{pdfdoc}%
2538 \fi
2539 }
2540 \Hy@AtBeginDocument{%
2541 \ifx\HyPsd@LoadUnicode\relax
2542 \else
2543 \def\HyPsd@LoadUnicode{%
2544 \Hy@Error{%
2545 Unicode support for bookmarks is not available.\MessageBreak
2546 Activate unicode support by using one of the options\MessageBreak
2547 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2548 in the preamble%
2549 }%\ehc
2550 \global\let\HyPsd@LoadUnicode\relax
2551 \global\Hy@unicodedefalse
2552 \global\let\Hy@unicodetrue\Hy@unicodedefalse

```

```

2553 }%
2554 \fi
2555 }

2556 \define@key{Hyp}{pdfencoding}{%
2557 \edef\HyPsd@temp{#1}%
2558 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2559 \let\HyPsd@pdfencoding\HyPsd@temp
2560 \Hy@unicodedefalse
2561 \else
2562 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2563 \z@
2564 \else
2565 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2566 \z@
2567 \else
2568 \@ne
2569 \fi
2570 \fi
2571 \let\HyPsd@pdfencoding\HyPsd@temp
2572 \hypersetup{unicode}%
2573 \ifHy@unicode
2574 \def\HyPsd@pdfencoding{#1}%
2575 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2576 \HyPsd@LoadStringEncoding
2577 \fi
2578 \else
2579 \Hy@Warning{Cannot switch to unicode bookmarks}%
2580 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2581 \fi
2582 \else
2583 \@onelevel@sanitize\HyPsd@temp
2584 \Hy@Warning{%
2585 Values of option `pdfencoding':\MessageBreak
2586 `pdfdoc', `unicode', `auto'.\MessageBreak
2587 Ignoring unknown value `\HyPsd@temp'%
2588 }%
2589 \fi
2590 \fi
2591 }

2592 \def\HyPsd@pdfencoding@auto{auto}
2593 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2594 \def\HyPsd@pdfencoding@unicode{unicode}

change 2020-08-14, use unicode by default:
2595 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
2596 \HyPsd@LoadUnicode
2597 \def\HyPsd@LoadStringEncoding{%
2598 \RequirePackage{stringenc}[2009/12/15]%
2599 \let\HyPsd@LoadStringEncoding\relax
2600 }
2601 \Hy@AtBeginDocument{%
2602 \@ifpackageloaded{stringenc}{%
2603 \let\HyPsd@LoadStringEncoding\relax
2604 }{%

```

```

2605 \def\HyPsd@LoadStringEnc{%
2606 \Hy@WarningNoLine{%
2607   Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
2608   in the preamble or load the package there%
2609 }%
2610 }%
2611 }%
2612 }
2613 \define@key{Hyp}{psdextra}[true]{%
2614 \Hy@boolkey{psdextra}{#1}%
2615 \HyPsd@LoadExtra
2616 }
2617 \def\hypersetup{\kvsetkeys{Hyp}}
2618 \newif\ifHy@setpdfversion
2619 \define@key{Hyp}{pdfversion}{%
2620 \@ifundefined{Hy@pdfversion@#1}{%
2621 \PackageWarning{hyperref}{%
2622   Unsupported PDF version `#1'.\MessageBreak
2623   Valid values: 1.2-1.7, 2.0%
2624 }%
2625 }{%
2626 \Hy@setpdfversiontrue
2627 \@nameuse{Hy@pdfversion@#1}%
2628 }%
2629 }
\Hy@pdfminorversion already used elsewhere to denote \pdfminorversion or
\pdfvariable majorversion} so introduce new names here.
2630 \@namedef{Hy@pdfversion@1.2}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{2}}%
2631 \@namedef{Hy@pdfversion@1.3}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{3}}%
2632 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{4}}%
2633 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{5}}%
2634 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{6}}%
2635 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
  norversion{7}}%
2636 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
  norversion{0}}%
2637 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{5}
Legacy name, earlier releases assumed 1.x
2638 \let\Hy@pdfversion\Hy@pdf@minorversion
2639 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
  norversion\relax}
2640 \def\Hy@pdfmajorminor@version{\numexpr100*\Hy@pdfmajorversion+\Hy@pdfmi-
  norversion\relax}
if pdfminorversion is defined, make sure pdfmajorversion is too.
2641 \@ifundefined{pdfminorversion}{}{%
2642 \@ifundefined{pdfmajorversion}{}%
2643 \newcount\pdfmajorversion

```

```

2644 \pdfmajorversion=1
2645 }{}%
2646 }
2647 \ifx\pdfmajorversion\@undefined\else
2648 \def\Hy@pdfmajorversion{\pdfmajorversion}
2649 \fi

```

10 Options for different drivers

```

2650 \newif\ifHy@DviMode
2651 \let\Hy@DviErrMsg\ltx@empty
2652 \ifpdf
2653 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2654 \else
2655 \ifxetex
2656 \def\Hy@DviErrMsg{XeTeX is running}%
2657 \else
2658 \ifvtex
2659 \ifnum\OpMode=\z@
2660 \Hy@DviModetrue
2661 \else
2662 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2663 \fi
2664 \else
2665 \Hy@DviModetrue
2666 \fi
2667 \fi
2668 \fi
2669 \def\HyOpt@CheckDvi#1{%
2670 \ifHy@DviMode
2671 \expandafter\ltx@firstofone
2672 \else
2673 \Hy@Error{%
2674 Wrong DVI mode driver option `#1',\MessageBreak
2675 because \Hy@DviErrMsg
2676 }\@ehc
2677 \expandafter\ltx@gobble
2678 \fi
2679 }

2680 \DeclareVoidOption{tex4ht}{%
2681 \Hy@texhttrue
2682 \kvsetkeys{Hyp}{colorlinks=true}%
2683 \def\BeforeTeXIVht{\RequirePackage{color}}%
2684 \def\Hy@driver{htex4ht}%
2685 \def\MaybeStopEarly{%
2686 \Hy@Message{Stopped early}%
2687 \Hy@AtBeginDocument{%
2688 \PDF@FinishDoc
2689 \gdef\PDF@FinishDoc{}}%
2690 }%
2691 \endinput
2692 }%
2693 }
2694 \DeclareVoidOption{pdftex}{%

```

```

2695 \ifpdf
2696 \def\Hy@driver{hpdftex}%
2697 \PassOptionsToPackage{pdftex}{color}%
2698 \else
2699 \Hy@Error{%
2700   Wrong driver option `pdftex',\MessageBreak
2701   because pdfTeX in PDF mode is not detected%
2702 } \@ehc
2703 \fi
2704 }
2705 \DeclareVoidOption{luatex}{%
2706 \ifpdf
2707 \ifx\pdfextension\@undefined
2708 \def\Hy@driver{hpdftex}%
2709 \PassOptionsToPackage{pdftex}{color}%
2710 \else
2711 \def\Hy@driver{hluatex}%
2712 \PassOptionsToPackage{luatex}{color}%
2713 \fi
2714 \else
2715 \Hy@Error{%
2716   Wrong driver option `luatex',\MessageBreak
2717   because luaTeX in PDF mode is not detected%
2718 } \@ehc
2719 \fi
2720 }
2721 \DeclareVoidOption{nativepdf}{%
2722 \HyOpt@CheckDvi{nativepdf}{%
2723 \def\Hy@driver{hdvips}%
2724 \PassOptionsToPackage{dvips}{color}%
2725 }%
2726 }
2727 \DeclareVoidOption{dvipdfm}{%
2728 \HyOpt@CheckDvi{dvipdfm}{%
2729 \def\Hy@driver{hdvipdfm}%
2730 }%
2731 }
2732 \DeclareVoidOption{dvipdfmx}{%
2733 \HyOpt@CheckDvi{dvipdfmx}{%
2734 \def\Hy@driver{hdvipdfm}%
2735 \PassOptionsToPackage{dvipdfmx}{color}%
2736 }%
2737 }
2738 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2739 \expandafter\ifx\csname if#1\expandafter\endcsname
2740 \csname iftrue\endcsname
2741 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2742 \else
2743 \chardef\SpecialDvipdfmxOutlineOpen\z@
2744 \fi
2745 }
2746 \DeclareVoidOption{xetex}{%
2747 \ifxetex
2748 \def\Hy@driver{hxetex}%

```



```

2749 \else
2750 \Hy@Error{%
2751   Wrong driver option `xetex',\MessageBreak
2752   because XeTeX is not detected%
2753 } \@ehc
2754 \fi
2755 }
2756 \DeclareVoidOption{pdfmark}{%
2757 \HyOpt@CheckDvi{pdfmark}{%
2758 \def\Hy@driver{hdvips}%
2759 }%
2760 }
2761 \DeclareVoidOption{dvips}{%
2762 \HyOpt@CheckDvi{dvips}{%
2763 \def\Hy@driver{hdvips}%
2764 \PassOptionsToPackage{dvips}{color}%
2765 }%
2766 }
2767 \DeclareVoidOption{hypertex}{%
2768 \HyOpt@CheckDvi{hypertex}{%
2769 \def\Hy@driver{hypertex}%
2770 }%
2771 }
2772 \let\Hy@MaybeStopNow\relax
2773 \DeclareVoidOption{vtex}{%
2774 \ifvtex
2775 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2776 \def\Hy@driver{hvtex}%
2777 \else
2778 \ifnum\OpMode=10\relax
2779 \def\Hy@driver{hvtexhtm}%
2780 \def\MaybeStopEarly{%
2781 \Hy@Message{Stopped early}%
2782 \Hy@AtBeginDocument{%
2783 \PDF@FinishDoc
2784 \gdef\PDF@FinishDoc{}}%
2785 }%
2786 \endinput
2787 }%
2788 \else
2789 \Hy@Error{%
2790   Wrong driver option `vtex',\MessageBreak
2791   because of wrong OpMode (\the\OpMode)%
2792 } \@ehc
2793 \fi
2794 \fi
2795 \else
2796 \Hy@Error{%
2797   Wrong driver option `vtex',\MessageBreak
2798   because VTeX is not running%
2799 } \@ehc
2800 \fi
2801 }
2802 \DeclareVoidOption{vtexpdfmark}{%

```

```

2803 \ifvtex
2804 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2805 \def\Hy@driver{hvtexmrk}%
2806 \else
2807 \Hy@Error{%
2808   Wrong driver option `vtexpdfmark',\MessageBreak
2809   because of wrong OpMode (\the\OpMode)%
2810 } \@ehc
2811 \fi
2812 \else
2813 \Hy@Error{%
2814   Wrong driver option `vtexpdfmark',\MessageBreak
2815   because VTeX is not running%
2816 } \@ehc
2817 \fi
2818 }
2819 \DeclareVoidOption{dviwindo}{%
2820 \HyOpt@CheckDvi{dviwindo}{%
2821 \def\Hy@driver{hdviwind}%
2822 \kvsetkeys{Hyp}{colorlinks}%
2823 \PassOptionsToPackage{dviwindo}{color}%
2824 }%
2825 }
2826 \DeclareVoidOption{dvipsone}{%
2827 \HyOpt@CheckDvi{dvipsone}{%
2828 \def\Hy@driver{hdvipson}%
2829 \PassOptionsToPackage{dvipsone}{color}%
2830 }%
2831 }
2832 \DeclareVoidOption{textures}{%
2833 \HyOpt@CheckDvi{textures}{%
2834 \def\Hy@driver{htexture}%
2835 }%
2836 }
2837 \DeclareVoidOption{latex2html}{%
2838 \Hy@Warning{Option `latex2html` is obsolete. \MessageBreak
2839 A current html.sty will do all necessary (re)definitions%
2840 }%
2841 }
2842 \DeclareVoidOption{hitex}{%
2843 \ifhint
2844 \IfFileExists{hhitex.def}
2845 {\def\Hy@driver{hhitex}}%
2846 {\Hy@Warning{%
2847   Missing driver file `hhitex.def',\MessageBreak
2848   ignoring hitex driver%
2849 }}%
2850 \else
2851 \Hy@Error{%
2852   Wrong driver option `hitex',\MessageBreak
2853   because HiTeX is not detected%
2854 } \@ehc
2855 \fi
2856 }

```

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

```
2857 \DeclareVoidOption{ps2pdf}{%
2858   \HyOpt@CheckDvi{ps2pdf}{%
2859     \def\Hy@driver{hdvips}%
2860     \PassOptionsToPackage{dvips}{color}%
2861   }%
2862 }

2863 \let\HyOpt@DriverFallback\ltx@empty
2864 \define@key{Hyp}{driverfallback}{%
2865   \ifHy@DviMode
2866     \def\HyOpt@DriverFallback{#1}%
2867     \Hy@Match\HyOpt@DriverFallback}{%
2868       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertext|ps2pdf|
2869         latex2html|tex4ht)$%
2870     }{)%
2871     \Hy@Warning{%
2872       Invalid driver `#1' for option\MessageBreak
2873         `driverfallback'%
2874     }%
2875     \let\HyOpt@DriverFallback\ltx@empty
2876   }%
2877 \fi
2878 }

2879 \let\HyOpt@CustomDriver\ltx@empty
2880 \define@key{Hyp}{customdriver}{%
2881   \IfFileExists{#1.def}{%
2882     \def\HyOpt@CustomDriver{#1}%
2883   }{)%
2884   \Hy@Warning{%
2885     Missing driver file `#1.def',\MessageBreak
2886     ignoring custom driver%
2887   }%
2888 }%
2889 }
```

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.

```
2890 \define@key{Hyp}{hyperfigures}[true]{%
2891   \Hy@boolkey{hyperfigures}{#1}%
2892 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2893 \define@key{Hyp}{hyperfootnotes}[true]{%
2894   \Hy@boolkey{hyperfootnotes}{#1}%
2895 }
```

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

```
2896 \def\back@none{none}
2897 \def\back@section{section}
2898 \def\back@page{page}
2899 \def\back@slide{slide}
2900 \define@key{Hyp}{backref}[section]{%
```

```

2901 \lowercase{\def\Hy@tempa{#1}}%
2902 \ifx\Hy@tempa\@empty
2903   \let\Hy@tempa\back@section
2904 \fi
2905 \ifx\Hy@tempa\Hy@false
2906   \let\Hy@tempa\back@none
2907 \fi
2908 \ifx\Hy@tempa\back@slide
2909   \let\Hy@tempa\back@section
2910 \fi
2911 \ifx\Hy@tempa\back@page
2912   \PassOptionsToPackage{hyperpageref}{backref}%
2913   \Hy@backreftrue
2914 \else
2915   \ifx\Hy@tempa\back@section
2916     \PassOptionsToPackage{hyperref}{backref}%
2917     \Hy@backreftrue
2918   \else
2919     \ifx\Hy@tempa\back@none
2920       \Hy@backreffalse
2921     \else
2922       \Hy@WarnOptionValue{#1}{backref}{%
2923         `section', `slide', `page', `none',\MessageBreak
2924         or `false'}%
2925     \fi
2926   \fi
2927 \fi
2928 }
2929 \define@key{Hyp}{pagebackref}[true]{%
2930 \edef\Hy@tempa{#1}%
2931 \lowercase\expandafter{%
2932 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2933 }%
2934 \ifx\Hy@tempa\@empty
2935   \let\Hy@tempa\Hy@true
2936 \fi
2937 \ifx\Hy@tempa\Hy@true
2938   \PassOptionsToPackage{hyperpageref}{backref}%
2939   \Hy@backreftrue
2940 \else
2941   \ifx\Hy@tempa\Hy@false
2942     \Hy@backreffalse
2943   \else
2944     \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
2945   \fi
2946 \fi
2947 }

```

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

```

2948 \define@key{Hyp}{hyperindex}[true]{%
2949 \Hy@boolkey{hyperindex}{#1}%
2950 }

```

Configuration of encap char.

```

2951 \define@key{Hyp}{encap}{\|}{%
2952 \def\HyInd@EncapChar{#1}%
2953 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2954 \def\HyLang@afrikaans{%
2955 \def\equationautorefname{Vergelyking}%
2956 \def\footnoteautorefname{Voetnota}%
2957 \def\itemautorefname{Item}%
2958 \def\figureautorefname{Figuur}%
2959 \def\tableautorefname{Tabel}%
2960 \def\partautorefname{Deel}%
2961 \def\appendixautorefname{Bylae}%
2962 \def\chapterautorefname{Hoofstuk}%
2963 \def\sectionautorefname{Afdeling}%
2964 \def\subsectionautorefname{Subafdeling}%
2965 \def\subsubsectionautorefname{Subsubafdeling}%
2966 \def\paragraphautorefname{Paragraaf}%
2967 \def\subparagraphautorefname{Subparagraaf}%
2968 \def\FancyVerbLineautorefname{Lyn}%
2969 \def\theoremautorefname{Teorema}%
2970 \def\pageautorefname{Bladsy}%
2971 }
2972 \def\HyLang@english{%
2973 \def\equationautorefname{Equation}%
2974 \def\footnoteautorefname{footnote}%
2975 \def\itemautorefname{item}%
2976 \def\figureautorefname{Figure}%
2977 \def\tableautorefname{Table}%
2978 \def\partautorefname{Part}%
2979 \def\appendixautorefname{Appendix}%
2980 \def\chapterautorefname{chapter}%
2981 \def\sectionautorefname{section}%
2982 \def\subsectionautorefname{subsection}%
2983 \def\subsubsectionautorefname{subsubsection}%
2984 \def\paragraphautorefname{paragraph}%
2985 \def\subparagraphautorefname{subparagraph}%
2986 \def\FancyVerbLineautorefname{line}%
2987 \def\theoremautorefname{Theorem}%
2988 \def\pageautorefname{page}%
2989 }
2990 \def\HyLang@french{%
2991 \def\equationautorefname{'equation}%
2992 \def\footnoteautorefname{note}%
2993 \def\itemautorefname{item}%
2994 \def\figureautorefname{figure}%
2995 \def\tableautorefname{tableau}%
2996 \def\partautorefname{partie}%
2997 \def\appendixautorefname{annexe}%
2998 \def\chapterautorefname{chapitre}%
2999 \def\sectionautorefname{section}%

```

```

3000 \def\subsectionautorefname{sous-section}%
3001 \def\subsubsectionautorefname{sous-sous-section}%
3002 \def\paragraphautorefname{paragraphe}%
3003 \def\subparagraphautorefname{sous-paragraphe}%
3004 \def\FancyVerbLineautorefname{ligne}%
3005 \def\theoremautorefname{th\`eor\`eme}%
3006 \def\pageautorefname{page}%
3007 }
3008 \def\HyLang@german{%
3009 \def\equationautorefname{Gleichung}%
3010 \def\footnoteautorefname{Fu\ss note}%
3011 \def\itemautorefname{Punkt}%
3012 \def\figureautorefname{Abbildung}%
3013 \def\tableautorefname{Tabelle}%
3014 \def\partautorefname{Teil}%
3015 \def\appendixautorefname{Anhang}%
3016 \def\chapterautorefname{Kapitel}%
3017 \def\sectionautorefname{Abschnitt}%
3018 \def\subsectionautorefname{Unterabschnitt}%
3019 \def\subsubsectionautorefname{Unterunterabschnitt}%
3020 \def\paragraphautorefname{Absatz}%
3021 \def\subparagraphautorefname{Unterabsatz}%
3022 \def\FancyVerbLineautorefname{Zeile}%
3023 \def\theoremautorefname{Theorem}%
3024 \def\pageautorefname{Seite}%
3025 }
3026 \def\HyLang@italian{%
3027 \def\equationautorefname{Equazione}%
3028 \def\footnoteautorefname{nota}%
3029 \def\itemautorefname{punto}%
3030 \def\figureautorefname{Figura}%
3031 \def\tableautorefname{Tabella}%
3032 \def\partautorefname{Parte}%
3033 \def\appendixautorefname{Appendice}%
3034 \def\chapterautorefname{Capitolo}%
3035 \def\sectionautorefname{sezione}%
3036 \def\subsectionautorefname{sottosezione}%
3037 \def\subsubsectionautorefname{sottosottosezione}%
3038 \def\paragraphautorefname{paragrafo}%
3039 \def\subparagraphautorefname{sottoparagrafo}%
3040 \def\FancyVerbLineautorefname{linea}%
3041 \def\theoremautorefname{Teorema}%
3042 \def\pageautorefname{Pag.\@}%
3043 }
3044 \def\HyLang@magyar{%
3045 \def\equationautorefname{Egyenlet}%
3046 \def\footnoteautorefname{l\`abjegyzet}%
3047 \def\itemautorefname{Elem}%
3048 \def\figureautorefname{\`Abra}%
3049 \def\tableautorefname{T\`abl\`azat}%
3050 \def\partautorefname{R\`esz}%
3051 \def\appendixautorefname{F\`uggel\`ek}%
3052 \def\chapterautorefname{fejezet}%
3053 \def\sectionautorefname{szakasz}%

```

```

3054 \def\subsectionautorefname{alszakasz}%
3055 \def\subsubsectionautorefname{alalszakasz}%
3056 \def\paragraphautorefname{bekezd'es}%
3057 \def\subparagraphautorefname{albekezd'es}%
3058 \def\FancyVerbLineautorefname{sor}%
3059 \def\theoremautorefname{T'etel}%
3060 \def\pageautorefname{oldal}%
3061 }
3062 \def\HyLang@portuges{%
3063 \def\equationautorefname{Equa\c c\~ao}%
3064 \def\footnoteautorefname{Nota de rodap'e}%
3065 \def\itemautorefname{Item}%
3066 \def\figureautorefname{Figura}%
3067 \def\tableautorefname{Tabela}%
3068 \def\partautorefname{Parte}%
3069 \def\appendixautorefname{Ap\~endice}%
3070 \def\chapterautorefname{Cap\itulo}%
3071 \def\sectionautorefname{Se\c c\~ao}%
3072 \def\subsectionautorefname{Subse\c c\~ao}%
3073 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3074 \def\paragraphautorefname{par\agrafo}%
3075 \def\subparagraphautorefname{subpar\agrafo}%
3076 \def\FancyVerbLineautorefname{linha}%
3077 \def\theoremautorefname{Teorema}%
3078 \def\pageautorefname{P\agina}%
3079 }

```

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`.

```

3080 \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`?

```

3081 \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`.

```

3082 % \def\equationautorefname{%
3083 %   \cyr\cyrv\cyrry\cyrr\cyra\cyrrh\cyre\cyrn\cyri\cyre
3084 % }%

```

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

```

3085 \def\footnoteautorefname{%
3086   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3087 }%

```

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}”

```
3088 % \def\footnoteautorefname{%
3089 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3090 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3091 % }%
```

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

```
3092 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3093 % \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.

```
3094 \def\itemautorefname{\cyr\cyrp.}%
3095 % \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.

```
3096 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3097 \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.

```
3098 \def\partautorefname{\cyr\cyrch.}%
3099 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3100 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

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

```
3101 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3102 % \def\appendixautorefname{%
3103 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3104 % }%
```

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.

```
3105 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3106 \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.

```
3107 \def\paragraphautorefname{\cyr\cyrp.}%
3108 \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.

```
3109 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3110 % \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.

```
3111 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3112 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
```

```
3113 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3114 % \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 ...

```
3115 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3116 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
3117 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3118 \def\pageautorefname{\cyr\cyrs.}%
```

```
3119 }
```

```
3120 \def\HyLang@spanish{%
```

```
3121 \def\equationautorefname{Ecuaci'on}%
```

```
3122 \def\footnoteautorefname{Nota a pie de p'agina}%
```

```
3123 \def\itemautorefname{Elemento}%
```

```
3124 \def\figureautorefname{Figura}%
```

```
3125 \def\tableautorefname{Tabla}%
```

```
3126 \def\partautorefname{Parte}%
```

```
3127 \def\appendixautorefname{Ap'endice}%
```

```
3128 \def\chapterautorefname{Cap'itulo}%
```

```
3129 \def\sectionautorefname{Secci'on}%
```

```
3130 \def\subsectionautorefname{Subsecci'on}%
```

```
3131 \def\subsubsectionautorefname{Subsubsecci'on}%
```

```
3132 \def\paragraphautorefname{P'arrafo}%
```

```
3133 \def\subparagraphautorefname{Subp'arrafo}%
```

```
3134 \def\FancyVerbLineautorefname{L'inea}%
```

```
3135 \def\theoremautorefname{Teorema}%
```

```
3136 \def\pageautorefname{P'agina}%
```

```
3137 }
```

```
3138 \def\HyLang@catalan{%
```

```
3139 \def\equationautorefname{Equaci'o}%
```

```
3140 \def\footnoteautorefname{Nota al peu de p`agina}%
```

```
3141 \def\itemautorefname{Element}%
```

```
3142 \def\figureautorefname{Figura}%
```

```
3143 \def\tableautorefname{Taula}%
```

```
3144 \def\partautorefname{Part}%
```

```
3145 \def\appendixautorefname{Ap`endix}%
```

```
3146 \def\chapterautorefname{Cap'itol}%
```

```

3147 \def\sectionautorefname{Secci\`o}%
3148 \def\subsectionautorefname{Subsecci\`o}%
3149 \def\subsubsectionautorefname{Subsubsecci\`o}%
3150 \def\paragraphautorefname{Par\`agraf}%
3151 \def\subparagraphautorefname{Subpar\`agraf}%
3152 \def\FancyVerbLineautorefname{L\`inia}%
3153 \def\theoremautorefname{Teorema}%
3154 \def\pageautorefname{P\`agina}%
3155 }

3156 \def\HyLang@vietnamese{%
3157   \def\equationautorefname{Ph\`uhorn{}}\ohorn{ng tr\`inh}%
3158   \def\footnoteautorefname{Ch\`u th\`ich}%
3159   \def\itemautorefname{m\`d{u}c}%
3160   \def\figureautorefname{H\`inh}%
3161   \def\tableautorefname{B\`h{a}ng}%
3162   \def\partautorefname{Ph\`acircumflex{n}}%
3163   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3164   \def\chapterautorefname{ch\`uhorn{}}\ohorn{ng}%
3165   \def\sectionautorefname{m\`d{u}c}%
3166   \def\subsectionautorefname{m\`d{u}c}%
3167   \def\subsubsectionautorefname{m\`d{u}c}%
3168   \def\paragraphautorefname{\`dj{o}d{a}n}%
3169   \def\subparagraphautorefname{\`dj{o}d{a}n}%
3170   \def\FancyVerbLineautorefname{d\`ong}%
3171   \def\theoremautorefname{D\`J{d}i\`nh l\`y}%
3172   \def\pageautorefname{Trang}%
3173 }

```

Greek, see github issue 52

```

3174 \def\HyLang@greek{%
3175   \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\text-
3176     tomega\textsigma\textteta}%
3177   \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\text-
3178     teta\textmu\textepsilon\acconos\textiota\textomega\textsigma\textteta}%
3179   \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textep-
3180     silon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3181   \def\figureautorefname{\textSigma\textchi\acconos\textteta\textmu\textal-
3182     pha}%
3183   \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\text-
3184     talpha}%
3185   \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvar-
3186     sigma}%
3187   \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\text-
3188     rho\texttau\textteta\textmu\textalpha}%
3189   \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textal-
3190     pha\textlambda\textalpha\textiota\textomicron}%
3191   \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\text-
3192     teta\texttau\textalpha}%
3193   \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\ac-
3194     conos\textomicron\texttau\textteta\texttau\textalpha}%
3195   \def\subsubsectionautorefname{\textupsilon\textpi\textomicron-\textupsilon\textpi\textomicron\text-
3196     rho\textalpha\textphi\textrho\acconos\textalpha\textgamma\text-
3197     rho\textalpha\textphi\textomicron\textvarsigma}%
3198   \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\text-

```

```

        talpha\textrho\acctonos\textalpha\textgamma\textrho\textalpha\textphi\textomi-
        cron\textvarsigma}%
3188 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\ac-
        ctonos\texteta}%
3189 \def\theoremautorefname{\textTheta\textepsilon\acctonos\textomega\text-
        rho\texteta\textmu\textalpha}%
3190 \def\pageautorefname{\textsigma\textepsilon\textlambda\acctonos\textiota\textdelta\text-
        alpha}%
3191 }

3192 \def\HyLang@dutch{%
3193 \def\equationautorefname{Vergelijking}%
3194 \def\footnoteautorefname{voetnoot}%
3195 \def\itemautorefname{punt}%
3196 \def\figureautorefname{Figuur}%
3197 \def\tableautorefname{Tabel}%
3198 \def\partautorefname{Deel}%
3199 \def\appendixautorefname{Bijlage}%
3200 \def\chapterautorefname{hoofdstuk}%
3201 \def\sectionautorefname{paragraaf}%
3202 \def\subsectionautorefname{deelparagraaf}%
3203 \def\subsubsectionautorefname{deel-deelparagraaf}%
3204 \def\paragraphautorefname{alinea}%
3205 \def\subparagraphautorefname{deelalinea}%
3206 \def\FancyVerbLineautorefname{regel}%
3207 \def\theoremautorefname{Stelling}%
3208 \def\pageautorefname{pagina}%
3209 }

3210 \def\HyLang@norsk{%
3211 \def\equationautorefname{Ligning}%
3212 \def\footnoteautorefname{fotnote}%
3213 \def\itemautorefname{element}%
3214 \def\figureautorefname{Figur}%
3215 \def\tableautorefname{Tabell}%
3216 \def\partautorefname{Del}%
3217 \def\appendixautorefname{Tillegg}%
3218 \def\chapterautorefname{kapittel}%
3219 \def\sectionautorefname{seksjon}%
3220 \def\subsectionautorefname{underseksjon}%
3221 \def\subsubsectionautorefname{under-underseksjon}%
3222 \def\paragraphautorefname{avsnitt}%
3223 \def\subparagraphautorefname{underavsnitt}%
3224 \def\FancyVerbLineautorefname{Linje}%
3225 \def\theoremautorefname{Teorem}%
3226 \def\pageautorefname{side}%
3227 }

3228 \def\HyLang@danish{%
3229 \def\equationautorefname{Ligning}%
3230 \def\footnoteautorefname{fodnote}%
3231 \def\itemautorefname{element}%
3232 \def\figureautorefname{Figur}%
3233 \def\tableautorefname{Tabel}%
3234 \def\partautorefname{Del}%
3235 \def\appendixautorefname{Bilag}%
3236 \def\chapterautorefname{kapitel}%

```

```

3237 \def\sectionautorefname{sektion}%
3238 \def\subsectionautorefname{under-sektion}%
3239 \def\subsubsectionautorefname{under-under-sektion}%
3240 \def\paragraphautorefname{afsnit}%
3241 \def\subparagraphautorefname{underafsnit}%
3242 \def\FancyVerbLineautorefname{linje}%
3243 \def\theoremautorefname{Teorem}%
3244 \def\pageautorefname{side}%
3245 }
3246 \def\HyLang@swedish{%
3247 \def\equationautorefname{Ekvation}%
3248 \def\footnoteautorefname{fotnot}%
3249 \def\itemautorefname{punkt}%
3250 \def\figureautorefname{Figur}%
3251 \def\tableautorefname{Tabell}%
3252 \def\partautorefname{Del}%
3253 \def\appendixautorefname{Bilaga}%
3254 \def\chapterautorefname{kapitel}%
3255 \def\sectionautorefname{avsnitt}%
3256 \def\subsectionautorefname{underavsnitt}%
3257 \def\subsubsectionautorefname{under-underavsnitt}%
3258 \def\paragraphautorefname{paragraf}%
3259 \def\subparagraphautorefname{underparagraf}%
3260 \def\FancyVerbLineautorefname{linje}%
3261 \def\theoremautorefname{Teorem}%
3262 \def\pageautorefname{sida}%
3263 }

```

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

```

3264 \def\HyLang@addto#1#2{%
3265 #2%
3266 \@temptokena{#2}%
3267 \ifx#1\relax
3268 \let#1\@empty
3269 \fi
3270 \ifx#1\@undefined
3271 \edef#1{\the\@temptokena}%
3272 \else
3273 \toks@\expandafter{#1}%
3274 \edef#1{\the\toks@\the\@temptokena}%
3275 \fi
3276 \@temptokena{}\toks@\@temptokena
3277 }
3278 \def\HyLang@DeclareLang#1#2#3{%
3279 \ifpackagewith{babel}{#1}{%
3280 \expandafter\HyLang@addto
3281 \csname extras#1\expandafter\endcsname
3282 \csname HyLang@#2\endcsname
3283 \begingroup
3284 \edef\x{\endgroup
3285 #3%
3286 }%
3287 \x

```

```

3288 \@@namedef{HyLang@#1@done}{}%
3289 }{}%
3290 \begingroup
3291 \edef\x##1##2{%
3292 \noexpand\ifx##2\relax
3293 \errmessage{No definitions for language #2' found!}%
3294 \noexpand\fi
3295 \endgroup
3296 \noexpand\define@key{Hyp}{#1}[]{}%
3297 \noexpand\@ifundefined{HyLang@#1@done}{%
3298 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3299 ##3%
3300 \noexpand\@@namedef{HyLang@#1@done}{}%
3301 }{}%
3302 }%
3303 }%
3304 \expandafter\x\csname extras#1\expandafter\endcsname
3305 \csname HyLang@#2\endcsname
3306 }
3307 \HyLang@DeclareLang{english}{english}{}
3308 \HyLang@DeclareLang{UKenglish}{english}{}
3309 \HyLang@DeclareLang{british}{english}{}
3310 \HyLang@DeclareLang{USenglish}{english}{}
3311 \HyLang@DeclareLang{american}{english}{}
3312 \HyLang@DeclareLang{german}{german}{}
3313 \HyLang@DeclareLang{austrian}{german}{}
3314 \HyLang@DeclareLang{ngerman}{german}{}
3315 \HyLang@DeclareLang{naustrian}{german}{}
3316 \HyLang@DeclareLang{nswissgerman}{german}{}
3317 \HyLang@DeclareLang{swissgerman}{german}{}
3318 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3319 \HyLang@DeclareLang{brazil}{portuges}{}
3320 \HyLang@DeclareLang{brazilian}{portuges}{}
3321 \HyLang@DeclareLang{portuguese}{portuges}{}
3322 \HyLang@DeclareLang{spanish}{spanish}{}
3323 \HyLang@DeclareLang{catalan}{catalan}{}
3324 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3325 \HyLang@DeclareLang{french}{french}{}
3326 \HyLang@DeclareLang{frenchb}{french}{}
3327 \HyLang@DeclareLang{français}{french}{}
3328 \HyLang@DeclareLang{acadian}{french}{}
3329 \HyLang@DeclareLang{canadien}{french}{}
3330 \HyLang@DeclareLang{italian}{italian}{}
3331 \HyLang@DeclareLang{magyar}{magyar}{}
3332 \HyLang@DeclareLang{hungarian}{magyar}{}
3333 \HyLang@DeclareLang{greek}{greek}{}
3334 \HyLang@DeclareLang{dutch}{dutch}{}
3335 \HyLang@DeclareLang{norsk}{norsk}{}
3336 \HyLang@DeclareLang{norwegian}{norsk}{}
3337 \HyLang@DeclareLang{danish}{danish}{}
3338 \HyLang@DeclareLang{swedish}{swedish}{}

```

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

```

3339 \DeclareVoidOption{vietnamese}{%

```

```

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

```

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

```

3355 \DeclareVoidOption{arabic}{-%
3356 \Hy@AtEndOfPackage{%
3357   \@ifundefined{T@PU}{-}{%
3358     \input{puaenc.def}%
3359   }%
3360 }%
3361 }

```

13 Options to change appearance of links

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

```

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

```

```

3387 \endgroup
3388 }
3389 \define@key{Hyp}{frenchlinks}[true]{%
3390 \Hy@boolkey{frenchlinks}{#1}%
3391 }

```

14 Bookmarking

```

3392 \begingroup\expandafter\expandafter\expandafter\endgroup
3393 \expandafter\ifx\csname chapter\endcsname\relax
3394 \def\toclevel@part{0}%
3395 \else
3396 \def\toclevel@part{-1}%
3397 \fi
3398 \def\toclevel@chapter{0}
3399 \def\toclevel@section{1}
3400 \def\toclevel@subsection{2}
3401 \def\toclevel@subsubsection{3}
3402 \def\toclevel@paragraph{4}
3403 \def\toclevel@subparagraph{5}
3404 \def\toclevel@figure{0}
3405 \def\toclevel@table{0}

3406 \define@key{Hyp}{bookmarks}[true]{%
3407 \Hy@boolkey{bookmarks}{#1}%
3408 }

3409 \define@key{Hyp}{bookmarksopen}[true]{%
3410 \Hy@boolkey{bookmarksopen}{#1}%
3411 }

```

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.

```

3412 \let\Hy@bookmarksdepth\c@tocdepth
3413 \define@key{Hyp}{bookmarksdepth}[]{}%
3414 \begingroup
3415 \edef\x{#1}%
3416 \ifx\x\empty
3417 \global\let\Hy@bookmarksdepth\c@tocdepth
3418 \else
3419 \@ifundefined{toclevel@\x}{%
3420 \@onelevel@sanitize\x
3421 \edef\y{\expandafter\@car\x\@nil}%
3422 \ifcase 0\expandafter\ifx\y-1\fi
3423 \expandafter\ifnum\expandafter`\y>47 %
3424 \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax

```

```

3425     \Hy@Warning{Unknown document division name (\x)}%
3426     \else
3427     \setbox\z@=\hbox{%
3428     \count@=\x
3429     \xdef\Hy@bookmarksdepth{\the\count@}%
3430     }%
3431     \fi
3432   }{%
3433     \setbox\z@=\hbox{%
3434     \count@=\csname toplevel@\x\endcsname
3435     \xdef\Hy@bookmarksdepth{\the\count@}%
3436     }%
3437   }%
3438   \fi
3439 \endgroup
3440 }

```

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

```

3441 \define@key{Hyp}{bookmarksopenlevel}{%
3442 \def\@bookmarksopenlevel{#1}%
3443 }
3444 \def\@bookmarksopenlevel{\maxdimen}
3445 % `bookmarkstype' to specify which `toc' file to mimic
3446 \define@key{Hyp}{bookmarkstype}{%
3447 \def\Hy@bookmarkstype{#1}%
3448 }
3449 \def\Hy@bookmarkstype{toc}

```

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

```

3450 \define@key{Hyp}{bookmarksnumbered}[true]{%
3451 \Hy@boolkey{bookmarksnumbered}{#1}%
3452 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3453 \define@key{Hyp}{CJKbookmarks}[true]{%
3454 \Hy@boolkey{CJKbookmarks}{#1}%
3455 }
3456 \def\Hy@temp#1{%
3457 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3458 }
3459 \def\Hy@@temp#1#2#3{%
3460 \define@key{Hyp}{#2color}{%
3461 \HyColor@HyperrefColor{##1}#1%
3462 }%
3463 \def#1{#3}%
3464 }
3465 \Hy@temp{link}{red}
3466 \Hy@temp{anchor}{black}
3467 \Hy@temp{cite}{green}
3468 \Hy@temp{file}{cyan}
3469 \Hy@temp{url}{magenta}
3470 \Hy@temp{menu}{red}
3471 \Hy@temp{run}{\@filecolor}
3472 \define@key{Hyp}{pagecolor}{%

```



```

3473 \Hy@WarningPageColor
3474 }
3475 \def\Hy@WarningPageColor{%
3476 \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3477 \global\let\Hy@WarningPageColor\relax
3478 }
3479 \define@key{Hyp}{allcolors}{%
3480 \HyColor@HyperrefColor{#1}\@linkcolor
3481 \HyColor@HyperrefColor{#1}\@anchorcolor
3482 \HyColor@HyperrefColor{#1}\@citecolor
3483 \HyColor@HyperrefColor{#1}\@filecolor
3484 \HyColor@HyperrefColor{#1}\@urlcolor
3485 \HyColor@HyperrefColor{#1}\@menucolor
3486 \HyColor@HyperrefColor{#1}\@runcolor
3487 }
3488 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3489 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3490 \let\@baseurl\@empty
3491 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3492 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3493 \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.

```

3494 \let\@pdfpagetransition\relax
3495 \define@key{Hyp}{pdfpagetransition}{%
3496 \def\@pdfpagetransition{#1}%
3497 }

```

`\@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.

```

3498 \let\@pdfpageduration\relax
3499 \define@key{Hyp}{pdfpageduration}{%
3500 \def\@pdfpageduration{#1}%
3501 \Hy@Match\@pdfpageduration-}{%
3502 ~(|[0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3503 }-}{%
3504 \Hy@Warning{%
3505   Invalid value `'\@pdfpageduration'\MessageBreak
3506   of option `pdfpageduration'\MessageBreak
3507   is replaced by an empty value%
3508 }%
3509 \let\@pdfpageduration\ltx@empty
3510 }%
3511 }

```

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).

```

3512 \def\Hy@ColorList{cite,file,link,menu,run,url}
3513 \@for\Hy@temp:=\Hy@ColorList\do{%
3514   \edef\Hy@temp{%
3515     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3516       \noexpand\HyColor@HyperrefBorderColor
3517       {##1}%
3518       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3519       {hyperref}%
3520       {\Hy@temp bordercolor}%
3521     }%
3522   }%
3523   \Hy@temp
3524 }
3525 \define@key{Hyp}{pagebordercolor}{%
3526   \Hy@WarningPageBorderColor
3527 }
3528 \def\Hy@WarningPageBorderColor{%
3529   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3530   \global\let\Hy@WarningPageBorderColor\relax
3531 }
3532 \define@key{Hyp}{allbordercolors}{%
3533   \def\Hy@temp##1##2{%
3534     \HyColor@HyperrefBorderColor{##1}##1{hyperref}{##2bordercolor}%
3535   }%
3536   \Hy@temp\@citebordercolor{cite}%
3537   \Hy@temp\@filebordercolor{file}%
3538   \Hy@temp\@linkbordercolor{link}%
3539   \Hy@temp\@menubordercolor{menu}%
3540   \Hy@temp\@runbordercolor{run}%
3541   \Hy@temp\@urlbordercolor{url}%
3542 }

3543 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{##1}}
3544 \Hy@DefNameKey{pdfhighlight}{%
3545   \do{/I}{Invert}%
3546   \do{/N}{None}%
3547   \do{/O}{Outline}%
3548   \do{/P}{Push}%
3549 }
3550 \def\Hy@setpdfhighlight{%
3551   \ifx\@pdfhighlight\@empty
3552     \else
3553       /H\@pdfhighlight
3554     \fi
3555 }
3556 \define@key{Hyp}{pdfborder}{%
3557   \let\Hy@temp\@pdfborder
3558   \def\@pdfborder{##1}%
3559   \Hy@Match\@pdfborder}{%

```

```

3560  ^\HyPat@NonNegativeReal/ %
3561  \HyPat@NonNegativeReal/ %
3562  \HyPat@NonNegativeReal/%
3563  ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*]?$%
3564  }-}{-%
3565  \Hy@Warning{%
3566    Invalid value ` \@pdfborder'\MessageBreak
3567    for option `pdfborder'.\MessageBreak
3568    Option setting is ignored%
3569  }%
3570  \let\@pdfborder\Hy@temp
3571  }%
3572  }
3573  \define@key{Hyp}{pdfborderstyle}{-%
3574  \let\Hy@temp\@pdfborderstyle
3575  \def\@pdfborderstyle{#1}%
3576  \Hy@Match\@pdfborderstyle}{-%
3577  ^-%
3578  ( */Type */Border%
3579  | */W +\HyPat@NonNegativeReal/%
3580  | */S */[SDBIU]%
3581  | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?}%
3582  )* *$%
3583  }-}{-%
3584  \Hy@Warning{%
3585    Invalid value ` \@pdfborderstyle'\MessageBreak
3586    for option `pdfborderstyle'.\MessageBreak
3587    Option setting is ignored%
3588  }%
3589  \let\@pdfborderstyle\Hy@temp
3590  }%
3591  }
3592  \def\Hy@setpdfborder{%
3593  \ifx\@pdfborder\@empty
3594  \else
3595  /Border[\@pdfborder]%
3596  \fi
3597  \ifx\@pdfborderstyle\@empty
3598  \else
3599  /BS<<\@pdfborderstyle>>%
3600  \fi
3601  }
3602  \Hy@DefNameKey{pdfpagemode}{-%
3603  \do{UseNone}{-%
3604  \do{UseOutlines}{-%
3605  \do{UseThumbs}{-%
3606  \do{FullScreen}{-%
3607  \do{UseOC}{PDF 1.5}%
3608  \do{UseAttachments}{PDF 1.6}%
3609  }
3610  \Hy@DefNameKey{pdfnonfullscreenpagemode}{-%
3611  \do{UseNone}{-%
3612  \do{UseOutlines}{-%
3613  \do{UseThumbs}{-%

```

```

3614 \do{FullScreen}{}%
3615 \do{UseOC}{PDF 1.5}%
3616 \do{UseAttachments}{PDF 1.6}%
3617 }
3618 \Hy@DefNameKey{pdfdirection}{%
3619 \do{L2R}{Left to right}%
3620 \do{R2L}{Right to left}%
3621 }
3622 \Hy@DefNameKey{pdfviewarea}{%
3623 \do{MediaBox}{}%
3624 \do{CropBox}{}%
3625 \do{BleedBox}{}%
3626 \do{TrimBox}{}%
3627 \do{ArtBox}{}%
3628 }
3629 \Hy@DefNameKey{pdfviewclip}{%
3630 \do{MediaBox}{}%
3631 \do{CropBox}{}%
3632 \do{BleedBox}{}%
3633 \do{TrimBox}{}%
3634 \do{ArtBox}{}%
3635 }
3636 \Hy@DefNameKey{pdfprintarea}{%
3637 \do{MediaBox}{}%
3638 \do{CropBox}{}%
3639 \do{BleedBox}{}%
3640 \do{TrimBox}{}%
3641 \do{ArtBox}{}%
3642 }
3643 \Hy@DefNameKey{pdfprintclip}{%
3644 \do{MediaBox}{}%
3645 \do{CropBox}{}%
3646 \do{BleedBox}{}%
3647 \do{TrimBox}{}%
3648 \do{ArtBox}{}%
3649 }
3650 \Hy@DefNameKey{pdfprintscaling}{%
3651 \do{AppDefault}{}%
3652 \do{None}{}%
3653 }
3654 \Hy@DefNameKey{pdfduplex}{%
3655 \do{Simplex}{}%
3656 \do{DuplexFlipShortEdge}{}%
3657 \do{DuplexFlipLongEdge}{}%
3658 }
3659 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3660 \do{true}{}%
3661 \do{false}{}%
3662 }
3663 \define@key{Hyp}{pdfprintpagerange}{%
3664 \def\@pdfprintpagerange{#1}%
3665 }
3666 \Hy@DefNameKey{pdfnumcopies}{%
3667 \do{2}{two copies}%

```

```

3668 \do{3}{three copies}%
3669 \do{4}{four copies}%
3670 \do{5}{five copies}%
3671 }

3672 \define@key{Hyp}{pdfusetitle}[true]{%
3673 \Hy@boolkey{pdfusetitle}{#1}%
3674 }

3675 \def\HyXeTeX@CheckUnicode{%
3676 \ifxetex
3677 \ifHy@unicode
3678 \else
3679 \Hy@WarningNoLine{%
3680 XeTeX driver only supports unicode.\MessageBreak
3681 Enabling option `unicode'%
3682 }%
3683 \kvsetkeys{Hyp}{unicode}%
3684 \fi
3685 \else
3686 \let\HyXeTeX@CheckUnicode\relax
3687 \fi
3688 }

3689 \def\HyPsd@PrerenderUnicode#1{%
3690 \begingroup
3691 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3692 \else
3693 \sbox0{%
3694 \let\GenericInfo@gobbletwo
3695 \let\GenericWarning@gobbletwo
3696 \let\GenericError@gobblefour
3697 \PrerenderUnicode{#1}%
3698 }%
3699 \fi
3700 \endgroup
3701 }

3702 \define@key{Hyp}{pdftitle}{%
3703 \AddToDocumentProperties[hyperref]{pdftitle}{#1}%
3704 \HyXeTeX@CheckUnicode
3705 \HyPsd@PrerenderUnicode{#1}%
3706 \pdfstringdef\@pdftitle{#1}%
3707 }

3708 \define@key{Hyp}{pdfauthor}{%
3709 \AddToDocumentProperties[hyperref]{pdfauthor}{#1}%
3710 \HyXeTeX@CheckUnicode
3711 \HyPsd@PrerenderUnicode{#1}%
3712 \pdfstringdef\@pdfauthor{#1}%
3713 }

3714 \define@key{Hyp}{pdfproducer}{%
3715 \AddToDocumentProperties[hyperref]{pdfproducer}{#1}%
3716 \HyXeTeX@CheckUnicode
3717 \HyPsd@PrerenderUnicode{#1}%
3718 \pdfstringdef\@pdfproducer{#1}%
3719 }

3720 \define@key{Hyp}{pdfcreator}{%
3721 \AddToDocumentProperties[hyperref]{pdfcreator}{#1}%

```

```

3722 \HyXeTeX@CheckUnicode
3723 \HyPsd@PrerenderUnicode{#1}%
3724 \pdfstringdef\@pdfcreator{#1}%
3725 }
3726 \define@key{Hyp}{addtopdfcreator}{%
3727 \HyXeTeX@CheckUnicode
3728 \HyPsd@PrerenderUnicode{#1}%
3729 \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
3730 }
3731 \define@key{Hyp}{pdfcreationdate}{%
3732 \begingroup
3733 \Hy@unicodedefalse
3734 \pdfstringdef\@pdfcreationdate{#1}%
3735 \endgroup
3736 }
3737 \define@key{Hyp}{pdfmoddate}{%
3738 \begingroup
3739 \Hy@unicodedefalse
3740 \pdfstringdef\@pdfmoddate{#1}%
3741 \endgroup
3742 }
3743 \define@key{Hyp}{pdfsubject}{%
3744 \AddToDocumentProperties[hyperref]{pdfsubject}{#1}%
3745 \HyXeTeX@CheckUnicode
3746 \HyPsd@PrerenderUnicode{#1}%
3747 \pdfstringdef\@pdfsubject{#1}%
3748 }
3749 \define@key{Hyp}{pdfkeywords}{%
3750 \AddToDocumentProperties[hyperref]{pdfkeywords}{#1}%
3751 \HyXeTeX@CheckUnicode
3752 \HyPsd@PrerenderUnicode{#1}%
3753 \pdfstringdef\@pdfkeywords{#1}%
3754 }
3755 \define@key{Hyp}{pdftrapped}{%
3756 \lowercase{\edef\Hy@temp{#1}}%
3757 \ifx\Hy@temp\HyInfo@trapped@true
3758 \def\@pdftrapped{True}%
3759 \else
3760 \ifx\Hy@temp\HyInfo@trapped@false
3761 \def\@pdftrapped{False}%
3762 \else
3763 \ifx\Hy@temp\HyInfo@trapped@unknown
3764 \def\@pdftrapped{Unknown}%
3765 \else
3766 \ifx\Hy@temp\@empty
3767 \else
3768 \Hy@Warning{%
3769   Unsupported value `#1'\MessageBreak
3770   for option `pdftrapped'%
3771 }%
3772 \fi
3773 \def\@pdftrapped{}%
3774 \fi
3775 \fi

```

```

3776 \fi
3777 }
3778 \def\HyInfo@trapped@true{true}
3779 \def\HyInfo@trapped@false{false}
3780 \def\HyInfo@trapped@unknown{unknown}
3781 \def\HyInfo@TrappedUnsupported{%
3782 \ifx\@pdftrapped\@empty
3783 \else
3784 \Hy@WarningNoLine{`pdftrapped' is not supported by this driver}%
3785 \gdef\HyInfo@TrappedUnsupported{}}%
3786 \fi
3787 }
3788 \define@key{Hyp}{pdfinfo}{%
3789 \kvsetkeys{pdfinfo}{#1}%
3790 }
3791 \def\Hy@temp#1{%
3792 \lowercase{\Hy@temp@A{#1}}{#1}%
3793 }
3794 \def\Hy@temp@A#1#2{%
3795 \define@key{pdfinfo}{#2}{%
3796 \hypersetup{pdf#1={##1}}%
3797 }%
3798 }
3799 \Hy@temp{Title}
3800 \Hy@temp{Author}
3801 \Hy@temp{Keywords}
3802 \Hy@temp{Subject}
3803 \Hy@temp{Creator}
3804 \Hy@temp{Producer}
3805 \Hy@temp{CreationDate}
3806 \Hy@temp{ModDate}
3807 \Hy@temp{Trapped}
3808 \newif\ifHyInfo@AddonUnsupported
3809 \kv@set@family@handler{pdfinfo}{%
3810 \HyInfo@AddonHandler{#1}{#2}%
3811 }
3812 \let\HyInfo@do\relax
3813 \def\HyInfo@AddonHandler#1#2{%
3814 \ifx\kv@value\relax
3815 \Hy@Warning{%
3816 Option `pdfinfo': ignoring key ``kv@key' without value%
3817 }%
3818 \else
3819 \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3820 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3821 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3822 \ifHyInfo@AddonUnsupported
3823 \Hy@Warning{%
3824 This driver does not support additional\MessageBreak
3825 information entries, therefore\MessageBreak
3826 ``kv@key' is ignored%
3827 }%
3828 \else
3829 \def\HyInfo@tmp##1{%

```

```

3830     \kv@define@key{pdfinfo}{##1}{%
3831       \HyXeTeX@CheckUnicode
3832       \HyPsd@PrerenderUnicode{####1}%
3833       \pdfstringdef\HyInfo@Value{####1}%
3834       \global\expandafter
3835       \let\csname HyInfo@Value@##1\endcsname
3836         \HyInfo@Value
3837     }%
3838 }%
3839 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
3840 \global\expandafter
3841 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
3842   \csname KV@pdfinfo@\HyInfo@Key\endcsname
3843 \xdef\HyInfo@AddonList{%
3844   \HyInfo@AddonList
3845   \HyInfo@do{\HyInfo@Key}%
3846 }%
3847 \expandafter\kv@parse@normalized\expandafter{%
3848   \HyInfo@Key={#2}%
3849 }{%
3850   \kv@processor@default{pdfinfo}%
3851 }%
3852 \fi
3853 \else
3854   \expandafter\kv@parse@normalized\expandafter{%
3855     \HyInfo@Key={#2}%
3856   }{%
3857     \kv@processor@default{pdfinfo}%
3858   }%
3859 \fi
3860 \fi
3861 }
3862 \def\HyInfo@GenerateAddons{%
3863   \ifHyInfo@AddonUnsupported
3864     \def\HyInfo@Addons{}%
3865   \else
3866     \begingroup
3867     \toks@{}%
3868     \def\HyInfo@do##1{%
3869       \EdefEscapeName\HyInfo@Key{##1}%
3870       \edef\x{%
3871         \toks@{%
3872           \the\toks@
3873           /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3874         }%
3875       }%
3876       \x
3877     }%
3878     \HyInfo@AddonList
3879     \edef\x{\endgroup
3880       \def\noexpand\HyInfo@Addons{\the\toks@}%
3881     }%
3882     \x
3883   \fi

```



```

3884 }
3885 \global\let\HyInfo@AddonList\ltx@empty

3886 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3887 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3888 \let\setpdfinkmargin@gobble
3889 \def\calculate@pdfview#1 #2\{%
3890 \def\@pdfview{#1}%
3891 \ifx\#2\%
3892 \def\@pdfviewparams{-32768}%
3893 \else
3894 \def\@pdfviewparams{#2}%
3895 \fi
3896 }
3897 \def\Hy@number#1{%
3898 \the\numexpr#1\relax
3899 }%
3900 \define@key{Hyp}{pdfstartpage}{%
3901 \ifx\#1\%
3902 \let\@pdfstartpage\ltx@empty
3903 \else
3904 \edef\@pdfstartpage{\Hy@number{#1}}%
3905 \fi
3906 }%
3907 \define@key{Hyp}{pdfstartview}{%
3908 \ifx\#1\%
3909 \let\@pdfstartview\ltx@empty
3910 \else
3911 \def\@pdfstartview{/#1}%
3912 \fi
3913 }
3914 \def\HyPat@NonNegativeReal/{%
3915 \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
3916 }
3917 \define@key{Hyp}{pdfremotestartview}{%
3918 \ifx\#1\%
3919 \def\@pdfremotestartview{/Fit}%
3920 \else
3921 \edef\@pdfremotestartview{#1}%
3922 \Hy@Match\@pdfremotestartview{%
3923 ^{XYZ(%
3924   ()| %
3925   (null|-\HyPat@NonNegativeReal/) %
3926   (null|-\HyPat@NonNegativeReal/) %
3927   (null|\HyPat@NonNegativeReal/)%
3928   )| % end of "XYZ"
3929   Fit(%
3930   ()| %
3931   B| %
3932   (H|V|BH|BV)(%
3933   ()| %
3934   (null|\HyPat@NonNegativeReal/)%
3935   )| %
3936   R %
3937   \HyPat@NonNegativeReal/ %

```

```

3938         \HyPat@NonNegativeReal/ %
3939         \HyPat@NonNegativeReal/ %
3940         \HyPat@NonNegativeReal/%
3941     )% end of "Fit"
3942 )$%
3943 }{}{%
3944 \Hy@Warning{%
3945     Invalid value ` \@pdfremotestartview'\MessageBreak
3946     of `pdfremotestartview'\MessageBreak
3947     is replaced by `Fit'%
3948 }%
3949 \let\@pdfremotestartview\@empty
3950 }%
3951 \ifx\@pdfremotestartview\@empty
3952 \def\@pdfremotestartview{/Fit}%
3953 \else
3954 \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3955 \fi
3956 \fi
3957 }
3958 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3959 \define@key{Hyp}{pdftoolbar}[true]{%
3960 \Hy@boolkey{pdftoolbar}{#1}%
3961 }
3962 \define@key{Hyp}{pdfmenubar}[true]{%
3963 \Hy@boolkey{pdfmenubar}{#1}%
3964 }
3965 \define@key{Hyp}{pdfwindowui}[true]{%
3966 \Hy@boolkey{pdfwindowui}{#1}%
3967 }
3968 \define@key{Hyp}{pdffitwindow}[true]{%
3969 \Hy@boolkey{pdffitwindow}{#1}%
3970 }
3971 \define@key{Hyp}{pdfcenterwindow}[true]{%
3972 \Hy@boolkey{pdfcenterwindow}{#1}%
3973 }
3974 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3975 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
3976 }
3977 \define@key{Hyp}{pdfa}[true]{%
3978 \Hy@boolkey{pdfa}{#1}%
3979 }
3980 \define@key{Hyp}{pdfnewwindow}[true]{%
3981 \def\Hy@temp{#1}%
3982 \ifx\Hy@temp\@empty
3983 \Hy@pdfnewwindowsetfalse
3984 \else
3985 \Hy@pdfnewwindowsettrue
3986 \Hy@boolkey{pdfnewwindow}{#1}%
3987 \fi
3988 }
3989 \def\Hy@SetNewWindow{%
3990 \ifHy@pdfnewwindowset
3991 /NewWindow %

```

```

3992 \ifHy@pdfnewwindow true\else false\fi
3993 \fi
3994 }
3995 \Hy@DefNameKey{pdfpagelayout}{%
3996 \do{SinglePage}{}%
3997 \do{OneColumn}{}%
3998 \do{TwoColumnLeft}{}%
3999 \do{TwoColumnRight}{}%
4000 \do{TwoPageLeft}{PDF 1.5}%
4001 \do{TwoPageRight}{PDF 1.5}%
4002 }
4003 \define@key{Hyp}{pdflang}{%
4004 \edef\@pdflang{#1}%
4005 \def\Hy@temp{\relax}%
4006 \ifx\@pdflang\Hy@temp
4007 \let\@pdflang\relax
4008 \fi
4009 \ifx\@pdflang\relax
4010 \else
4011 \ifx\@pdflang\ltx@empty
4012 \else

```

Test according to ABNF of RFC 3066.

```

4013 \Hy@Match\@pdflang{icase}{%
4014 ~%
4015 [a-z]{1,8}%
4016 (-[a-z0-9]{1,8})*%
4017 $%
4018 }{%

```

Test according to ABNF of RFC 5646.

```

4019 \Hy@Match\@pdflang{icase}{%
4020 ~%
4021 (%
4022 % langtag
4023 (% language
4024 [a-z]{2,3}%
4025 ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4026 |[a-z]{4}% reserved for future use
4027 |[a-z]{5,8}% registered language subtag
4028 )%
4029 (-[a-z]{4})?% script
4030 (-([a-z]{2}|[0-9]{3}))?% region
4031 (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4032 (-[0-9a-wyz](-[a-z0-9]{2,8})+)% extension
4033 (-x(-[a-z0-9]{1,8})+)?% privateuse
4034 % privateuse
4035 |x(-[a-z0-9]{1,8})+%
4036 % grandfathered/irregular
4037 |en-GB-oed%
4038 |i-(ami|bnn|default|enochian|hak|klinton|lux|%
4039 mingo|navajo|pwn|tao|tay|tsu)%
4040 |sgn-(BE-FR|BE-NL|CH-DE)%
4041 % grandfathered/regular
4042 |art-lojban%

```

```

4043 | cel-gaulish%
4044 | no-(bok|nyn)%
4045 | zh-(guoyu|hakka|min|min-nan|xiang)%
4046 )%
4047 $%
4048 }{%

```

Test for unique extensions.

```

4049 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4050 \Hy@Match\@pdflang{icase}{~x-}{%
4051 % remove privateuse
4052 \edef\Hy@temp{-\@pdflang}%
4053 \Hy@Match\Hy@temp{icase}{%
4054 ~%
4055 (%
4056 (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4057 )%
4058 -x-%
4059 }{%
4060 \edef\Hy@temp{%
4061 \expandafter\strip@prefix\pdfastmatch1%
4062 }%
4063 }{}%
4064 \Hy@Match\Hy@temp{icase}{%
4065 (-[a-wyz0-9]-).*\ltx@backslashchar1%
4066 }{%
4067 \Hy@Warning{%
4068 Invalid language identifier `#1'\MessageBreak
4069 for option `pdfang', because it violates\MessageBreak
4070 well-formedness defined in RFC 4646\MessageBreak
4071 by duplicate singleton subtags%
4072 }%
4073 \let\@pdflang\relax
4074 }{}%
4075 }%
4076 }{}%

```

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

```

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

```

```

4094         in second subtag (RFC 3066)%
4095     }%
4096     \let\@pdflang\relax
4097 }{%
4098 \fi
4099 }{%
4100 \Hy@Warning{%
4101   Invalid language identifier `#1'\MessageBreak
4102   for option `pdflang', because it violates\MessageBreak
4103   well-formedness defined in RFC 5646%
4104 }%
4105 \let\@pdflang\relax
4106 }%
4107 }{%
4108 \Hy@Warning{%
4109   Invalid language identifier `#1'\MessageBreak
4110   for option `pdflang' (RFC 3066)%
4111 }%
4112 \let\@pdflang\relax
4113 }%
4114 \fi
4115 \fi
4116 }
4117 \define@key{Hyp}{pdfpagelabels}[true]{%
4118   \Hy@boolkey{pdfpagelabels}{#1}%
4119 }
4120 \define@key{Hyp}{pdfescapeform}[true]{%
4121   \Hy@boolkey{pdfescapeform}{#1}%
4122 }

```

Default values:

```

4123 \def\@linkbordercolor{1 0 0}
4124 \def\@urlbordercolor{0 1 1}
4125 \def\@menubordercolor{1 0 0}
4126 \def\@filebordercolor{0 .5 .5}
4127 \def\@runbordercolor{0 .7 .7}
4128 \def\@citebordercolor{0 1 0}
4129 \def\@pdfhighlight{/I}
4130 \let\@pdftitle\ltx@empty
4131 \let\@pdfauthor\ltx@empty
4132 \let\@pdfproducer\relax
4133 \def\@pdfcreator{LaTeX with hyperref}
4134 \let\@pdfcreationdate\ltx@empty
4135 \let\@pdfmoddate\ltx@empty
4136 \let\@pdfsubject\ltx@empty
4137 \let\@pdfkeywords\ltx@empty
4138 \let\@pdftrapped\ltx@empty
4139 \let\@pdfpagescrop\ltx@empty
4140 \def\@pdfstartview{/Fit}
4141 \def\@pdfremotestartview{/Fit}
4142 \def\@pdfstartpage{1}
4143 \let\@pdfprintpagerange\ltx@empty
4144 \let\@pdflang\relax
4145 \let\PDF@SetupDoc\@empty
4146 \let\PDF@FinishDoc\@empty

```

```

4147 \let\phantomsection\@empty
4148 \let\special@paper\@empty
4149 \def\HyperDestNameFilter#1{#1}
4150 \Hy@AtBeginDocument{%
4151   \begingroup
4152     \edef\x{\ifdim\stockheight>z@ \stockheight\else\paperheight\fi}%
4153     \dimen@=\x\relax
4154     \ifdim\dimen@>z@
4155       \else
4156         \dimen@=11in\relax
4157         \Hy@WarningNoLine{%
4158           Height of page (\expandafter\string\x) %
4159           is invalid (\the\x),\MessageBreak
4160           using 11in%
4161         }%
4162       \fi
4163       \dimen@=0.99626401\dimen@
4164       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4165     \endgroup
4166 }
4167 \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.

```

4168 \let\hyper@normalise\ExecuteOptions
4169 \let\ExecuteOptions\hypersetup
4170 \Hy@RestoreCatcodes
4171 \InputIfFileExists{hyperref.cfg}{-}{-}
4172 \Hy@SetCatcodes
4173 \let\ExecuteOptions\hyper@normalise
4174 \ifx\Hy@MaybeStopNow\relax
4175 \else
4176   \Hy@stoppedearlytrue
4177   \expandafter\Hy@MaybeStopNow
4178 \fi
4179 \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.

```

4180 \SetupKeyvalOptions{family=Hyp}
4181 \DeclareLocalOptions{%
4182   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4183 }

```

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

```

4184 \@ifpackagewith{hyperref}{tex4ht}{-%
4185 }-%
4186 \@ifpackageloaded{tex4ht}{-%
4187   \PassOptionsToPackage{tex4ht}{hyperref}%
4188 }-%
4189 \ltx@ifundefined{HCode}{-%
4190 }-%
4191 \begingroup
4192 \def\Hy@pkg{tex4ht}%

```

```

4193 \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4194 \def\Hy@param{#2#3}%
4195 \ifx\Hy@param\ltx@empty
4196 \expandafter\ltx@gobble
4197 \else
4198 \def\Hy@param{#3}%
4199 \ifx\Hy@param\Hy@pkg
4200 \PassOptionsToPackage{#2}{tex4ht}%
4201 \expandafter\expandafter\expandafter\@gobble
4202 \else
4203 \expandafter\expandafter\expandafter\ltx@firstofone
4204 \fi
4205 \fi
4206 {\Hy@temp@A#4\Hy@NIL}%
4207 }%
4208 \expandafter
4209 \Hy@temp@A\@documentclasshook\RequirePackage[]{\Hy@NIL
4210 \endgroup
4211 \PassOptionsToPackage{tex4ht}{hyperref}%
4212 }%
4213 }%
4214 }

4215 \let\ReadBookmarks\relax
4216 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4217 \def\Hy@xspace@end{}
4218 \ltx@ifundefined{xspaceaddexceptions}{%
4219 \Hy@AtBeginDocument{%
4220 \ltx@ifundefined{xspaceaddexceptions}{%
4221 }{%
4222 \def\Hy@xspace@end{%
4223 \ltx@gobble{end for xspace}%
4224 }%
4225 \xspaceaddexceptions{%
4226 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4227 }%
4228 }%
4229 }%
4230 }{%
4231 \def\Hy@xspace@end{%
4232 \ltx@gobble{end for xspace}%
4233 }%
4234 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4235 }

```

15.2 Option draft

```

4236 \Hy@AtBeginDocument{%
4237 \ifHy@draft
4238 \let\hyper@@anchor\@gobble
4239 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%

```

```

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

```

15.3 PDF/A

```

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

```



```

4292     {#2}%
4293     \expandafter\@gobble
4294     \fi
4295 }%
4296 \def\Hy@temp#1{%
4297   \expandafter\def\csname Hy@#1\endcsname{#1}%
4298   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4299   }%
4300 \Hy@temp{NextPage}%
4301 \Hy@temp{PrevPage}%
4302 \Hy@temp{FirstPage}%
4303 \Hy@temp{LastPage}%
4304 \else
4305 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4306 \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.

```

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

```

```

4338 \Hy@Info{Link nesting OFF}%
4339 \fi
4340 \ifHy@hyperindex
4341 \Hy@Info{Hyper index ON}%
4342 \else
4343 \Hy@Info{Hyper index OFF}%
4344 \fi
4345 \ifHy@plainpages
4346 \Hy@Info{Plain pages ON}%
4347 \else
4348 \Hy@Info{Plain pages OFF}%
4349 \fi
4350 \ifHy@backref
4351 \Hy@Info{Backreferencing ON}%
4352 \else
4353 \Hy@Info{Backreferencing OFF}%
4354 \fi
4355 \ifHy@implicit
4356 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4357 \else
4358 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4359 \def\MaybeStopEarly{%
4360 \Hy@Message{Stopped early}%
4361 \Hy@AtBeginDocument{%
4362 \PDF@FinishDoc
4363 \gdef\PDF@FinishDoc{}%
4364 }%
4365 \endinput
4366 }%
4367 \Hy@AtBeginDocument{%
4368 \let\autoref\ref
4369 \let\autopageref\pageref
4370 \ifx\@pdfpagemode\@empty
4371 \gdef\@pdfpagemode{UseNone}%
4372 \fi
4373 \global\Hy@backreffalse
4374 }%
4375 \Hy@AtEndOfPackage{%
4376 \global\let\ReadBookmarks\relax
4377 \global\let\WriteBookmarks\relax
4378 }%
4379 \fi
4380 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

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

```

4381 \@ifundefined{stockwidth}{\newdimen\stockwidth}{}
4382 \@ifundefined{stockheight}{\newdimen\stockheight}{}
4383 \Hy@AtEndOfPackage{%
4384 \@ifpackageloaded{tex4ht}{%
4385 \def\Hy@driver{htex4ht}%
4386 \Hy@texhttrue

```

4387 }{}%

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.

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

```

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

```

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

```

4473 \let\HyOpt@DriverType\ltx@empty
4474 \ifx\HyOpt@CustomDriver\ltx@empty
4475 \ifx\Hy@driver\@empty
4476 \def\HyOpt@DriverType{ (autodetected)}%
4477 \providecommand*{\Hy@defaultdriver}{hdvips}%
4478 \ifpdf
4479 \ifx\pdfextension\@undefined
4480 \def\Hy@driver{hpdtex}%
4481 \else
4482 \def\Hy@driver{hluatex}%
4483 \fi
4484 \else
4485 \ifxetex
4486 \def\Hy@driver{hxetex}%
4487 \else
4488 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4489 \def\Hy@driver{hvtexhtm}%
4490 \def\MaybeStopEarly{%

```

```

4491     \Hy@Message{Stopped early}%
4492     \Hy@AtBeginDocument{%
4493         \PDF@FinishDoc
4494         \gdef\PDF@FinishDoc{}%
4495     }%
4496     \endinput
4497 }%
4498 \else
4499 \ifhint
4500     \def\Hy@driver{hhtex}
4501 \else
4502     \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4503     \def\Hy@driver{hvtex}%
4504 \else
4505     \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4506     \def\Hy@driver{hvtex}%
4507 \else
4508     \ifx\HyOpt@DriverFallback\ltx@empty
4509     \let\Hy@driver\Hy@defaultdriver
4510     \def\HyOpt@DriverType{ (default)}%
4511 \else
4512     \begingroup
4513     \toks@\expandafter{\HyOpt@DriverFallback}%
4514     \edef\x{\endgroup
4515         \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4516     }%
4517     \x
4518     \ifx\Hy@driver\ltx@empty
4519     \let\Hy@driver\Hy@defaultdriver
4520     \def\HyOpt@DriverType{ (default)}%
4521 \else
4522     \def\HyOpt@DriverType{ (fallback)}%
4523 \fi
4524 \fi
4525 \fi
4526 \fi
4527 \fi
4528 \fi
4529 \fi
4530 \fi
4531 \ifx\Hy@driver\Hy@defaultdriver
4532     \def\Hy@temp{hdvwind}%
4533     \ifx\Hy@temp\Hy@driver
4534         \kvsetkeys{Hyp}{colorlinks}%
4535         \PassOptionsToPackage{dviwindo}{color}%
4536     \fi
4537 \fi
4538 \fi
4539 \else
4540     \def\HyOpt@DriverType{ (custom)}%
4541     \let\Hy@driver\HyOpt@CustomDriver
4542 \fi
4543 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4544 \chardef\Hy@VersionChecked=0 %

```

```

4545 \input{\Hy@driver.def}%
4546 \ifcase\Hy@VersionChecked
4547   \Hy@VersionCheck{\Hy@driver.def}%
4548 \fi
4549 \let\@unprocessedoptions\relax
4550 \Hy@RestoreCatcodes
4551 \Hy@DisableOption{tex4ht}%
4552 \Hy@DisableOption{pdftex}%
4553 \Hy@DisableOption{nativepdf}%
4554 \Hy@DisableOption{dviPDFM}%
4555 \Hy@DisableOption{dviPDFMX}%
4556 \Hy@DisableOption{dviPDFMX-outline-open}%
4557 \Hy@DisableOption{pdfmark}%
4558 \Hy@DisableOption{dvips}%
4559 \Hy@DisableOption{hypertext}%
4560 \Hy@DisableOption{vtex}%
4561 \Hy@DisableOption{vtexpdfmark}%
4562 \Hy@DisableOption{dviwindo}%
4563 \Hy@DisableOption{dvipsone}%
4564 \Hy@DisableOption{textures}%
4565 \Hy@DisableOption{latex2html}%
4566 \Hy@DisableOption{ps2pdf}%
4567 \Hy@DisableOption{xetex}%
4568 \Hy@DisableOption{driverfallback}%
4569 \Hy@DisableOption{customdriver}%
4570 \Hy@DisableOption{pdfversion}%
4571 }

```

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.

```

4572 \newif\ifHy@DvipdfmxOutlineOpen
4573 \ifxetex
4574   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4575   \else
4576     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4577     \Hy@DvipdfmxOutlineOpenttrue
4578   \fi
4579 \fi
4580 \begingroup\expandafter\expandafter\expandafter\endgroup
4581 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4582 \else
4583   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4584     \Hy@DvipdfmxOutlineOpenttrue
4585   \fi
4586 \fi

```

15.4.2 Bookmarks

```

4587 \def\WriteBookmarks{0}
4588 \def\@bookmarkopenstatus#1{%
4589   \ifHy@bookmarksopen

```

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

```

4590 \ifnum#1<\expandafter\@firstofone\expandafter
4591     {\number\@bookmarksopenlevel} % explicit space
4592 \else
4593     -%
4594 \fi
4595 \else
4596     -%
4597 \fi
4598 }
4599 \ifHy@bookmarks
4600 \Hy@Info{Bookmarks ON}%
4601 \ifx\@pdfpagemode\@empty
4602 \def\@pdfpagemode{UseOutlines}%
4603 \fi
4604 \else
4605 \let\@bookmarkopenstatus\ltx@gobble
4606 \Hy@Info{Bookmarks OFF}%
4607 \Hy@AtEndOfPackage{%
4608 \global\let\ReadBookmarks\relax
4609 \global\let\WriteBookmarks\relax
4610 }%
4611 \ifx\@pdfpagemode\@empty
4612 \def\@pdfpagemode{UseNone}%
4613 \fi
4614 \fi
4615 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
4616 \def\Hy@CatcodeWrapper#1{%
4617 \let\Hy@endWrap\ltx@empty
4618 \def\TMP@EnsureCode##1##2{%
4619 \edef\Hy@endWrap{%
4620 \Hy@endWrap
4621 \catcode##1 \the\catcode##1\relax
4622 }%
4623 \catcode##1 ##2\relax
4624 }%
4625 \TMP@EnsureCode{10}{12}% ^^J
4626 \TMP@EnsureCode{33}{12}% !
4627 \TMP@EnsureCode{34}{12}% "
4628 \TMP@EnsureCode{36}{3}% $ (math)
4629 \TMP@EnsureCode{38}{4}% & (alignment)
4630 \TMP@EnsureCode{39}{12}% '
4631 \TMP@EnsureCode{40}{12}% (
4632 \TMP@EnsureCode{41}{12}% )
4633 \TMP@EnsureCode{42}{12}% *
4634 \TMP@EnsureCode{43}{12}% +
4635 \TMP@EnsureCode{44}{12}% ,
4636 \TMP@EnsureCode{45}{12}% -
4637 \TMP@EnsureCode{46}{12}% .
4638 \TMP@EnsureCode{47}{12}% /
4639 \TMP@EnsureCode{58}{12}% :
4640 \TMP@EnsureCode{59}{12}% ;
4641 \TMP@EnsureCode{60}{12}% <
4642 \TMP@EnsureCode{61}{12}% =

```

```

4643 \TMP@EnsureCode{62}{12}% >
4644 \TMP@EnsureCode{63}{12}% ?
4645 \TMP@EnsureCode{91}{12}% [
4646 \TMP@EnsureCode{93}{12}% ]
4647 \TMP@EnsureCode{94}{7}% ^ (superscript)
4648 \TMP@EnsureCode{95}{8}% _ (subscript)
4649 \TMP@EnsureCode{96}{12}% `
4650 \TMP@EnsureCode{124}{12}% |
4651 \TMP@EnsureCode{126}{13}% ~ (active)
4652 #1\relax
4653 \Hy@EndWrap
4654 }

```

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

```

4655 \Hy@AtBeginDocument{%
4656 \ifHy@ocgcolorlinks
4657 \kvsetkeys{Hyp}{colorlinks}%
4658 \ifHy@pdfa
4659 \Hy@Warning{%
4660 PDF/A: Optional Content Groups are prohibited,\MessageBreak
4661 using `colorlinks' instead of `ocgcolorlinks'%
4662 }%
4663 \Hy@ocgcolorlinksfalse
4664 \fi
4665 \fi
4666 \ifHy@ocgcolorlinks
4667 \else
4668 \Hy@DisableOption{ocgcolorlinks}%
4669 \fi
4670 \ifHy@colorlinks
4671 \def\@pdfborder{0 0 0}%
4672 \let\@pdfborderstyle\@empty
4673 \Hy@CatcodeWrapper{%
4674 \RequirePackage{color}%
4675 }%
4676 \def\Hy@colorlink#1{%
4677 \begingroup
4678 \HyColor@UseColor#1%
4679 }%
4680 \def\Hy@endcolorlink{\endgroup}%
4681 \Hy@Info{Link coloring ON}%
4682 \else
4683 \ifHy@frenchlinks
4684 \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
4685 \def\Hy@endcolorlink{\endgroup}%
4686 \Hy@Info{French linking ON}%
4687 \else

```

for grouping consistency:

```

4688 \def\Hy@colorlink#1{\begingroup}%
4689 \def\Hy@endcolorlink{\endgroup}%
4690 \Hy@Info{Link coloring OFF}%
4691 \fi
4692 \fi

```



```

4693 \Hy@DisableOption{colorlinks}%
4694 \Hy@DisableOption{frenchlinks}%
4695 \ifHy@texht
4696 \else

```

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

```

4697 \ifHy@implicit
4698 \let \T@Ref\HyRef@Ref
4699 \def \@refstar#1{%
4700 \NR@ref@showkeys{#1}%
4701 \HyRef@StarSetRef{#1}\@firstoffive
4702 }
4703 \def \@pagerefstar#1{%
4704 \NR@ref@showkeys{#1}%
4705 \HyRef@StarSetRef{#1}\@secondoffive
4706 }
4707 \def \@namerefstar#1{%
4708 \NR@ref@showkeys{#1}%
4709 \HyRef@StarSetRef{#1}\@thirdoffive
4710 }
4711 \def \@Refstar#1{%
4712 \NR@ref@showkeys{#1}%
4713 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
4714 }%
4715 \else
4716 \fi
4717 \fi
4718 }
4719 \Hy@AtBeginDocument{%
4720 \ifx\ReadBookmarks\relax
4721 \else
4722 \Hy@CatcodeWrapper\ReadBookmarks
4723 \fi
4724 }
4725 \ifHy@backref
4726 \RequirePackage{backref}%
4727 \else
4728 \let\Hy@backout\@gobble
4729 \fi
4730 \Hy@DisableOption{backref}
4731 \Hy@DisableOption{pagebackref}
4732 \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.

```

4733 \begingroup
4734 \endlinechar=-1 %
4735 \catcode\^^A=14 %
4736 \catcode\^^M\active
4737 \catcode\%\active
4738 \catcode\#\active
4739 \catcode\_ \active
4740 \catcode\$\active
4741 \catcode\&\active
4742 \gdef\hyper@normalise{^^A
4743   \begingroup
4744   \catcode\^^M\active
4745   \def^^M{ }^^A
4746   \catcode\%\active
4747   \let%\@percentchar
4748   \let\%\@percentchar
4749   \catcode\#\active
4750   \def#{\hyper@hash}^^A
4751   \def#{\hyper@hash}^^A
4752   \@makeother\&^^A
4753   \edef&{\string&}^^A
4754   \edef\&{\string&}^^A
4755   \edef\textunderscore{\string_}^^A
4756   \let\_ \textunderscore
4757   \catcode\_ \active
4758   \let\_ \textunderscore
4759   \let~\hyper@tilde
4760   \let~\hyper@tilde
4761   \let\textasciitilde\hyper@tilde
4762   \let\\ \@backslashchar
4763   \edef${\string$}^^A
4764   \Hy@safe@activestrue
4765   \hyper@n@rmalise
4766 }^^A
4767 \catcode\#=6 ^^A
4768 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4769 \gdef\hyper@n@rmalise#1#2{^^A
4770   \def\Hy@tempa{#2}^^A
4771   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4772     \ltx@ReturnAfterElseFi{^^A
4773       \hyper@@normalise{#1}^^A
4774     }^^A
4775   \else
4776     \ltx@ReturnAfterFi{^^A
4777       \hyper@@normalise{#1}{#2}^^A
4778     }^^A
4779   \fi
4780 }^^A
4781 \gdef\hyper@@normalise#1#2{^^A
4782   \edef\Hy@tempa{^^A
4783     \endgroup
4784     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
4785   }^^A
4786   \Hy@tempa

```

```

4787 }^^A
4788 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4789   #1^^A
4790   \ifx\limits#2\limits
4791   \else
4792     \ltx@ReturnAfterFi{^^A
4793     \Hy@RemovePercentCr #2\@nil
4794   }^^A
4795   \fi
4796 }^^A
4797 \endgroup
4798 \providecommand*\hyper@chars{%
4799   \let\#\hyper@hash
4800   \let%\@percentchar
4801   \Hy@safe@activestrue
4802 }

4803 \def\hyperlink#1#2{%
4804   \hyper@@link{#1}{#2}%
4805 }

4806 \def\Hy@VerboseLinkStart#1#2{%
4807   \ifHy@verbose
4808     \begingroup
4809     \Hy@safe@activestrue
4810     \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
4811     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4812     \xdef\Hy@VerboseGlobalTemp{%
4813       \Hy@VerboseGlobalTemp, %
4814       line \the\inputlineno
4815     }%
4816     \endgroup
4817     \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4818     \@onelevel@sanitize\Hy@VerboseLinkInfo
4819   \fi
4820 }

4821 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4822 \def\Hy@VerboseLinkStop{%
4823   \ifHy@verbose
4824     \begingroup
4825     \edef\x{\endgroup
4826       \write\m@ne{%
4827         Package `hyperref' Info: %
4828         End of reference \Hy@VerboseLinkInfo.%
4829       }%
4830     }%
4831     \x
4832   \fi
4833 }

4834 \def\Hy@VerboseAnchor#1{%
4835   \ifHy@verbose
4836     \begingroup
4837     \Hy@safe@activestrue
4838     \Hy@Info{Anchor ``\HyperDestNameFilter{#1}'}%
4839   \endgroup

```

```

4840 \fi
4841 }

4842 \def\Hy@AllowHyphens{%
4843 \relax
4844 \ifhmode
4845 \penalty\@M
4846 \hskip\z@skip
4847 \fi
4848 }

4849 \DeclareRobustCommand*\href}[1][]{%
4850 \begingroup
4851 \setkeys{href}{#1}%
4852 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4853 }
4854 \def\Hy@href#{%
4855 \hyper@normalise\href@
4856 }
4857 \begingroup
4858 \catcode`\$=6 %
4859 \catcode`\#=12 %
4860 \gdef\href@\$1{\expandafter\href@split$1##\}%
4861 \gdef\href@split$1##$2##$3\\$4{%
4862 \hyper@@link{$1}{$2}{$3}{$4}%
4863 \endgroup
4864 }%
4865 \endgroup

```

Option ‘page’.

```

4866 \define@key{href}{page}{%
4867 \def\Hy@href@page{#1}%
4868 }
4869 \let\Hy@href@page\@empty
4870 \newcount\c@Hy@tempcnt
4871 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4872 \def\Hy@MakeRemoteAction{%
4873 \ifx\Hy@href@page\@empty
4874 \def\Hy@href@page{0}%
4875 \else
4876 \setcounter{Hy@tempcnt}{\Hy@href@page}%
4877 \ifnum\c@Hy@tempcnt<\@ne
4878 \Hy@Warning{%
4879 Invalid page number (\theHy@tempcnt)\MessageBreak
4880 for remote PDF file.\MessageBreak
4881 Using page 1%
4882 }%
4883 \def\Hy@href@page{0}%
4884 \else
4885 \global\advance\c@Hy@tempcnt\m@ne
4886 \edef\Hy@href@page{\theHy@tempcnt}%
4887 \fi
4888 \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.

```

4889 \ifx\Hy@href@nextactionraw\@empty
4890 \else
4891 \Hy@pdfnewwindowsettrue
4892 \Hy@pdfnewwindowtrue
4893 \fi
4894 }

```

Option ‘pdfremotestartview’.

```

4895 \define@key{href}{pdfremotestartview}{%
4896 \setkeys{Hyp}{pdfremotestartview={#1}}%
4897 }

```

Option ‘pdfnewwindow’.

```

4898 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4899 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4900 \newif\ifHy@href@ismap
4901 \define@key{href}{ismap}[true]{%
4902 \ltx@ifundefined{Hy@href@ismap#1}{%
4903 \Hy@Error{%
4904 Invalid value (#1) for key `ismap'.\MessageBreak
4905 Permitted values are `true' or `false'.\MessageBreak
4906 Ignoring `ismap'%
4907 } \@ehc
4908 }{%
4909 \csname Hy@href@ismap#1\endcsname
4910 }%
4911 }

```

Option ‘nextactionraw’.

```

4912 \let\Hy@href@nextactionraw\@empty
4913 \define@key{href}{nextactionraw}{%
4914 \edef\Hy@href@nextactionraw{#1}%
4915 \ifx\Hy@href@nextactionraw\@empty
4916 \else
4917 \Hy@Match\Hy@href@nextactionraw{}{%
4918 ~(\HyPat@ObjRef/|<<.*[/S[ /.+>>|%
4919 |( ?\HyPat@ObjRef/|<<.*[/S[ /.+>>)+ ?)]$%
4920 }-}{%
4921 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
4922 \Hy@href@nextactionraw\MessageBreak
4923 The action is discarded%
4924 }%
4925 }%
4926 \ifx\Hy@href@nextactionraw\@empty
4927 \else
4928 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4929 \fi
4930 \fi
4931 }
4932 \def\HyPat@ObjRef/{.+}

```

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

```

4933 \RequirePackage{url}
4934 \let\HyOrg@url\url

```

```

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

4940 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4941 \providecommand\hyper@image[2]{#2}

4942 \def\hypertarget#1#2{%
4943   \ifHy@nesting
4944     \hyper@@anchor{#1}{#2}%
4945   \else
4946     \hyper@@anchor{#1}{\relax}#2%
4947   \fi
4948 }

\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.

4949 \DeclareRobustCommand*\hyperref{%
4950   \ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4951 }
4952 \def\Hy@babelnormalise#1[#2]{%
4953   \begingroup
4954     \Hy@safe@activetrue
4955     \let\protect\@unexpandable@protect
4956     \edef\Hy@tempa{%
4957       \endgroup
4958       \noexpand#1{#2}}%
4959   }%
4960   \Hy@tempa
4961 }
4962 \def\@hyperref{\hyper@normalise\@hyperref}
4963 \def\@hyperref#1#2#3{%
4964   \edef\ref@one{\ifx\#2\#2\else#2.\fi#3}%
4965   \expandafter\tryhyper@link\ref@one\{#1}%
4966 }
4967 \def\tryhyper@link#1\#2{%
4968   \hyper@@link{#2}{#1}%
4969 }

4970 \def\hyperdef{\ifnextchar{\label@hyperdef}\@hyperdef}
4971 \def\@hyperdef#1#2#3{%, category, name, text
4972   \ifx\#1\%
4973     \def\Hy@AnchorName{#2}%
4974   \else
4975     \def\Hy@AnchorName{#1.#2}%
4976   \fi
4977   \ifHy@nesting
4978     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4979   \else

```

```

4980 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4981 \fi
4982 }

```

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.

```

4983 \let\hyperrefundefinedlink\@firstofone
4984 \def\label@hyperref[#1]{%
4985 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4986 }%
4987 \def\label@@hyperref#1#2#3{%
4988 \ifx#1\relax
4989 \protect\G@refundefinedtrue
4990 \@latex@warning{%
4991 Hyper reference `#2' on page \thepage \space undefined%
4992 }%
4993 \begingroup
4994 \hyperrefundefinedlink{#3}%
4995 \endgroup
4996 \else
4997 \hyper@@link{\expandafter\@fifthoffive#1}%
4998 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4999 \fi
5000 }
5001 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5002 % anchor text
5003 \@bsphack
5004 \ifx\#2\%
5005 \def\Hy@AnchorName{#3}%
5006 \else
5007 \def\Hy@AnchorName{#2.#3}%
5008 \fi
5009 \if@filesw
5010 \protected@write\@auxout{}{%
5011 \string\newlabel{#1}{\Hy@AnchorName}}%
5012 }%
5013 \fi
5014 \@esphack
5015 \ifHy@nesting
5016 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5017 \else
5018 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5019 \fi
5020 }

```

`\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`

```
5021 \ExplSyntaxOn
```

```

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

```

16.1 Link box support for XeTeX

```

5058 \newdimen\XeTeXLinkMargin
5059 \setlength{\XeTeXLinkMargin}{2pt}
5060 \ifxetex
5061   \font\XeTeXLink@font=pzdr at 1sp\relax
5062   \newcommand*{\XeTeXLink@space}{%
5063     \begingroup
5064       \XeTeXLink@font
5065       \@xxxii
5066     \endgroup
5067   }%
5068   \newcommand{\XeTeXLinkBox}[1]{%
5069     \begingroup
5070       \leavevmode
5071       \sbox\z@{#1}%
5072     \begingroup

```



```

5073     \dimen@=\dp\z@
5074     \advance\dimen@\XeTeXLinkMargin
5075     \setbox\tw@=\llap{%
5076       \hb@xt@\XeTeXLinkMargin{%
5077         \lower\dimen@\hbox{\XeTeXLink@space}%
5078         \hss
5079       }%
5080     }%
5081     \dp\tw@=\dp\z@
5082     \ht\tw@=\ht\z@
5083     \copy\tw@
5084   \endgroup
5085   \copy\z@
5086   \dimen@=\ht\z@
5087   \advance\dimen@\XeTeXLinkMargin
5088   \setbox\tw@=\rlap{%
5089     \hb@xt@\XeTeXLinkMargin{%
5090       \hss
5091       \raise\dimen@\hbox{\XeTeXLink@space}%
5092     }%
5093   }%
5094   \dp\tw@=\dp\z@
5095   \ht\tw@=\ht\z@
5096   \copy\tw@
5097   \endgroup
5098 }%
5099 \else
5100 \newcommand*\XeTeXLinkBox}[1]{%
5101   \begingroup
5102   \leavevmode
5103   \sbox\z@{#1}%
5104   \copy\z@
5105   \endgroup
5106 }%
5107 \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.

```

5108 \def\hyper@link{\let\Hy@reserved@a\relax
5109   \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5110 }
5111 % #1: type
5112 % #2: URL
5113 % #3: destination name
5114 % #4: text
5115 \def\hyper@link@[#1]#2#3#4{%
5116   \ltx@ifempty{#4}{% link text
5117     \Hy@Warning{Suppressing empty link}%
5118   }{%
5119     \begingroup

```

```

5120 \protected@edef\Hy@tempa{#2}%
5121 \edef\Hy@tempb{#3}%
5122 \ifx\Hy@tempa\ltx@empty
5123 \ifx\Hy@tempb\ltx@empty
5124 \Hy@Warning{Suppressing link with empty target}%
5125 \toks@{%
5126 \endgroup
5127 \ltx@secondoftwo
5128 }%
5129 \else
5130 \toks@{%
5131 \endgroup
5132 \hyper@link{#1}%
5133 }%
5134 \fi
5135 \else
5136 \toks@{%
5137 \endgroup
5138 \expandafter\hyper@readexternallink#2\{#1}%
5139 }%
5140 \fi
5141 \Hy@safe@activesfalse
5142 \toks@\expandafter{%
5143 \the\expandafter\toks@
5144 \expandafter{\Hy@tempb}{#4}%
5145 }%
5146 \the\toks@
5147 }%
5148 }

```

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.

```

5149 \def\hyper@readexternallink#1\{#2#3#4{%
5150 \begingroup
5151 \let\relax
5152 \expandafter\endgroup
5153 \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
5154 }
5155 \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.

```

5156 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5157 }

```

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

```

5158 \def\@pdftempwordfile{file}%
5159 \def\@pdftempwordrun{run}%
5160 \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:

```

5161 \ifx\#6\%
5162   \@hyper@linkfile file:#7\{#3}{#2}{#7}%
5163 \else
5164   \ifx\#4\%
5165     \@hyper@linkfile file:#7\{#3}{#2}{#7}%
5166   \else

```

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

```

5167   \def\@pdftempa{#4}%
5168   \ifx\@pdftempa\@pdftempwordfile
5169     \@hyper@linkfile#7\{#3}{#2}{#7}%
5170   \else

```

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

```

5171   \ifx\@pdftempa\@pdftempwordrun
5172     \ifHy@pdfa
5173       \Hy@Error{%
5174         PDF/A: Launch action is prohibited%
5175       }\@ehc
5176     \begingroup
5177       \leavevmode
5178       #2%
5179     \endgroup
5180   \else
5181     \@hyper@launch#7\{#3}{#2}%
5182   \fi
5183 \else

```

otherwise its a URL

```

5184     \hyper@linkurl{#3}{#7\ifx\#2\% \else\hyper@hash#2\fi}%
5185   \fi
5186 \fi
5187 \fi
5188 \fi
5189 }

```

By default, turn run: into file:

```

5190 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5191   \hyper@linkurl{#2}{%
5192     \Hy@linkfileprefix
5193     #1%
5194   \ifx\#3\%

```

```

5195 \else
5196 \hyper@hash
5197 #3%
5198 \fi
5199 }%
5200 }

```

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

```

5201 \def\@hyper@linkfile file:#1\|#2#3#4{%
5202 %file url,link string, name, original uri
5203 \filename@parse{#1}%
5204 \ifx\filename@ext\relax
5205 \edef\filename@ext{\XR@ext}%
5206 \fi
5207 \def\use@file{\filename@area\filename@base.\filename@ext}%
5208 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5209 \hyper@linkfile{#2}{\use@file}{#3}%
5210 }{%
5211 \ifx\@baseurl\@empty
5212 \hyper@linkurl{#2}{%
5213 #4\ifx\#3\else\hyper@hash#3\fi
5214 }%
5215 \else
5216 \hyper@linkurl{#2}{\use@file\ifx\#3\else\hyper@hash#3\fi}%
5217 \fi
5218 }%
5219 }

5220 \def\Hy@ifStringEndsWith#1#2{%
5221 \begingroup
5222 \edef\x{#1}%
5223 \@onelevel@sanitize\x
5224 \edef\x{.x}%
5225 \edef\y{#2}%
5226 \@onelevel@sanitize\y
5227 \edef\y{.y}%
5228 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5229 \endgroup
5230 \ifx\relax##2\relax
5231 \expandafter\ltx@secondoftwo
5232 \else
5233 \expandafter\ltx@firstoftwo
5234 \fi
5235 }%
5236 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5237 }

5238 \def\Hy@StringLocalhost{localhost}
5239 \@onelevel@sanitize\Hy@StringLocalhost
5240 \def\Hy@CleanupFile#1{%
5241 \edef#1{#1}%
5242 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5243 }
5244 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5245 \begingroup

```

```

5246 \toks@{\endgroup}%
5247 \def\x{#1}%
5248 \ifx\x@empty
5249 \def\x{#2}%
5250 \ifx\x@empty
5251 \toks@{\endgroup\def#5{/#3}}%
5252 \else
5253 \@onelevel@sanitize\x
5254 \ifx\x\Hy@StringLocalhost
5255 \toks@{\endgroup\def#5{/#3}}%
5256 \fi
5257 \fi
5258 \fi
5259 \the\toks@
5260 }

```

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.

```

5261 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5262 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5263 \ifx\#1\%
5264 #2\Hy@Warning{Ignoring empty anchor}%
5265 \else
5266 \def\anchor@spot{#2#3}%
5267 \let\put@me@back@empty
5268 \ifx\relax#2\relax
5269 \else
5270 \ifHy@nesting
5271 \else
5272 \ifcat a\noexpand#2\relax
5273 \else
5274 \ifcat 0\noexpand#2 \relax
5275 \else
5276 % \typeout{Anchor start is not alphanumeric %
5277 % on input line\the\inputlineno%
5278 % }%
5279 \let\anchor@spot@empty
5280 \def\put@me@back{#2#3}%
5281 \fi
5282 \fi
5283 \fi
5284 \fi
5285 \ifHy@activeanchor
5286 \anchor@spot
5287 \else
5288 \hyper@anchor{#1}%
5289 \fi
5290 \expandafter\put@me@back
5291 \fi

```

```

5292 \let\anchor@spot\@empty
5293 }
5294 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5295 \ifHy@destlabel

```

```

\hyper@newdestlabel

```

```

5296 \def\hyper@newdestlabel#1#2{%
5297   \begingroup
5298   \Hy@safe@activestruel
5299   \edef\x{\endgroup
5300     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5301   }%
5302   \x
5303 }%

```

```

\hyper@destlabel@hook

```

```

5304 \providecommand*\hyper@destlabel@hook{}%

```

```

\Hy@DestRename

```

```

5305 \newcommand*\Hy@DestRename}[2]{%
5306   \ltx@ifundefined{HyDL!#1}{%
5307     \begingroup
5308     \Hy@safe@activestruel
5309     \edef\dest@name{#1}%
5310     \edef\label@name{#2}%
5311     \hyper@destlabel@hook
5312     \Hy@IsNotEmpty{dest@name}{%
5313       \Hy@IsNotEmpty{label@name}{%
5314         \global\expandafter
5315         \let\csname HyDL!#1\endcsname\ltx@empty
5316         \iffilesw
5317           \protected@write\@auxout{}{%
5318             \string\hyper@newdestlabel
5319             {#1}%
5320             {\label@name}%
5321           }%
5322         \fi
5323       }%
5324     }%
5325     \endgroup
5326   }-}%
5327 }%

```

```

\HyperDestRename

```

```

5328 \newcommand*\HyperDestRename}[2]{%
5329   \AtBeginDocument{%
5330     \Hy@DestRename{#1}{#2}%
5331   }%
5332 }%
5333 \AtBeginDocument{}%

```

```
5334 \let\HyperDestRename\Hy@DestRename
5335 }%
```

\Hy@IsNotEmpty

```
5336 \def\Hy@IsNotEmpty#1{%
5337 \ltx@ifundefined{#1}\ltx@gobble{%
5338 \expandafter\ifx\csname#1\endcsname\ltx@empty
5339 \expandafter\ltx@gobble
5340 \else
5341 \expandafter\ltx@firstofone
5342 \fi
5343 }%
5344 }%

5345 \ltx@GlobalAppendToMacro\label@hook{%
5346 \HyperDestRename\@currentHref\label@name
5347 }%
```

\HyperDestLabelReplace

```
5348 \def\HyperDestLabelReplace#1{%
5349 \ltx@ifundefined{HyDL@#1}{%
5350 #1%
5351 }{%
5352 \csname HyDL@#1\endcsname
5353 }%
5354 }%
```

\HyperDestNameFilter

```
5355 \let\HyperDestNameFilter\HyperDestLabelReplace
5356 \else
```

\hyper@newdestlabel

```
5357 \let\hyper@newdestlabel\ltx@gobbletwo
```

\HyperDestLabelReplace

```
5358 \let\HyperDestLabelReplace\ltx@firstofone
```

\HyperDestRename

```
5359 \let\HyperDestRename\ltx@gobbletwo

5360 \fi
5361 \Hy@DisableOption{destlabel}
```

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

```
5362 \AddToHook{include/before}
5363 {\immediate\write\@partaux{\string\providecommand\string\hyper@newdest-
label[2]{}}
5364 \AddToHook{begindocument}
5365 {\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.

```
5366 \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
```

```
5367 \def\HyField@NewFlag#1#2{%
5368   \lowercase{\HyField@NewOption{#2}}%
5369   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5370 }
```

```
\HyField@NewFlagOnly
```

```
5371 \def\HyField@NewFlagOnly#1#2{%
5372   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5373 }
```

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

```
5374 \def\HyField@NewOption#1{%
5375   \expandafter\newif\csname ifFld@#1\endcsname
5376   \define@key{Field}{#1}[true]{%
5377     \lowercase{\Field@boolkey{##1}}{#1}%
5378   }%
5379 }
```

```
\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
```

```
5380 \def\HyField@NewBitsetFlag#1#2#3#4{%
5381   \begingroup
5382     \count@=#4\relax
5383     \advance\count@\m@ne
5384     \def\x###1{%
5385       \endgroup
5386       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5387       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
```



```

5388     \expandafter\edef\csname HyField@#3@##1\endcsname{%
5389         (\number#4) #2%
5390     }%
5391 \else
5392     \expandafter\edef\csname HyField@#3@##1\endcsname{%
5393         \csname HyField@#3@##1\endcsname
5394         /#2%
5395     }%
5396 \fi
5397 }%
5398 \expandafter\x\expandafter{\the\count@}%
5399 }

```

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

```

5400 \def\HyField@UseFlag#1#2{%
5401     \lowercase{\HyField@@UseFlag{#2}}{#1}%
5402 }

```

\HyField@@UseFlag

```

5403 \def\HyField@@UseFlag#1#2{%
5404     \bitsetSetValue{HyField@#2}{%
5405         \csname HyField@#2@#1\endcsname
5406     }{%
5407         \csname ifFld@#1\endcsname 1\else 0\fi
5408     }%
5409 }

```

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

```

5410 \def\HyField@SetFlag#1#2{%
5411     \lowercase{\HyField@@SetFlag{#2}}{#1}%
5412 }

```

\HyField@@SetFlag

```

5413 \def\HyField@@SetFlag#1#2{%
5414     \bitsetSetValue{HyField@#2}{%
5415         \csname HyField@#2@#1\endcsname
5416     }{1}%
5417 }

```

\HyField@PrintFlags

```

5418 \def\HyField@PrintFlags#1#2{%
5419     \ifHy@verbose
5420     \begingroup
5421         \let\Hy@temp\@empty
5422         \let\MessageBreak\relax
5423         \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5424         \bitsetGetSetBitList{HyField@#1}\do{%
5425             \edef\Hy@temp{%
5426                 \Hy@temp
5427                 \csname HyField@#1@\x\endcsname\MessageBreak
5428             }%
5429         }%
5430     \edef\x{\endgroup

```

```

5431 \noexpand\Hy@Info{%
5432   Field flags: %
5433   \expandafter\ifx\@car#1\@nil S\else/\fi
5434   #1 %
5435   \bitsetGetDec{HyField@#1} %
5436   (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5437   \Hy@temp
5438   for #2%
5439   }%
5440 } \x
5441 \fi
5442 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5443 \HyField@NewFlag{Ff}{ReadOnly}{1}
5444 \HyField@NewFlag{Ff}{Required}{2}
5445 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5446 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5447 \HyField@NewFlag{Ff}{Radio}{16}
5448 \HyField@NewFlag{Ff}{Pushbutton}{17}
5449 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5450 \HyField@NewFlag{Ff}{Multiline}{13}
5451 \HyField@NewFlag{Ff}{Password}{14}
5452 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5453 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5454 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5455 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5456 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5457 \HyField@NewFlag{Ff}{Combo}{18}
5458 \HyField@NewFlag{Ff}{Edit}{19}
5459 \HyField@NewFlag{Ff}{Sort}{20}
5460 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5461 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5462 \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.

```

5463 \newif\ifFld@popdown
5464 \define@key{Field}{popdown}{true}{%
5465   \lowercase{\Field@boolkey{#1}}{popdown}%
5466 }

```

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.

```

5467 \HyField@NewFlag{F}{Invisible}{1}
5468 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5469 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5470 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5471 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5472 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5473 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5474 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5475 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5476 \ifHy@pdfa
5477 \def\HyField@PDFAFIWarning#1#2{%
5478   \Hy@Warning{%
5479     PDF/A: Annotation flag `#1' must\MessageBreak
5480     be set to `#2'%
5481   }%
5482 }%
5483 \Fld@invisiblefalse
5484 \def\Fld@invisibletrue{%
5485   \HyField@PDFAFIWarning{invisible}{false}%
5486 }%
5487 \Fld@hiddenfalse
5488 \def\Fld@hiddentrue{%
5489   \HyField@PDFAFIWarning{hidden}{false}%
5490 }%
5491 \Fld@printtrue
5492 \def\Fld@printfalse{%
5493   \HyField@PDFAFIWarning{print}{true}%
5494 }%
5495 \Fld@nozoomtrue
5496 \def\Fld@nozoomfalse{%
5497   \HyField@PDFAFIWarning{nozoom}{true}%
5498 }%
5499 \Fld@norotatetrue
5500 \def\Fld@norotatefalse{%
5501   \HyField@PDFAFIWarning{norotate}{true}%
5502 }%
5503 \Fld@noviewfalse
5504 \def\Fld@noviewtrue{%
5505   \HyField@PDFAFIWarning{noview}{false}%
5506 }%
5507 \fi

```

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

```

5508 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5509 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5510 \HyField@NewFlag{Submit}{GetMethod}{4}
5511 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5512 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5513 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5514 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5515 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}

```

```

5516 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5517 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5518 \HyField@NewFlag{Submit}{ExclFKey}{12}
5519 \HyField@NewFlag{Submit}{EmbedForm}{14}

5520 \define@key{Field}{export}{%
5521   \lowercase{\def\Hy@temp{#1}}%
5522   \@ifundefined{Fld@export@\Hy@temp}{%
5523     \@onelevel@sanitize\Hy@temp
5524     \Hy@Error{%
5525       Unknown export format `'\Hy@temp'.\MessageBreak
5526       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5527     } \@ehc
5528   }{%
5529     \let\Fld@export\Hy@temp
5530   }%
5531 }
5532 \def\Fld@export{fdf}
5533 \@namedef{Fld@export@fdf}{0}%
5534 \@namedef{Fld@export@html}{1}%
5535 \@namedef{Fld@export@xfdf}{2}%
5536 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

5537 \def\HyField@FlagsSubmit{%
5538   \bitsetReset{HyField@Submit}%
5539   \ifcase\@nameuse{Fld@export@\Fld@export} %
5540     % FDF
5541     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5542     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5543     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5544     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5545     \HyField@UseFlag{Submit}{CanonicalFormat}%
5546     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5547     \HyField@UseFlag{Submit}{ExclFKey}%
5548     \HyField@UseFlag{Submit}{EmbedForm}%
5549   \or % HTML
5550     \HyField@SetFlag{Submit}{ExportFormat}%
5551     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5552     \HyField@UseFlag{Submit}{GetMethod}%
5553     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5554     \HyField@UseFlag{Submit}{CanonicalFormat}%
5555   \or % XFDF
5556     \HyField@SetFlag{Submit}{XFDF}%
5557     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5558     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5559     \HyField@UseFlag{Submit}{CanonicalFormat}%
5560   \or % PDF
5561     \HyField@SetFlag{Submit}{SubmitPDF}%
5562     \HyField@UseFlag{Submit}{GetMethod}%
5563   \fi
5564   \HyField@PrintFlags{Submit}{submit button field}%

```

```

5565 \bitsetIsEmpty{HyField@Submit}{%
5566 \let\Fld@submitflags\ltx@empty
5567 }{%
5568 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5569 }%
5570 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5571 \def\HyField@FlagsAnnot#1{%
5572 \bitsetReset{HyField@F}%
5573 \HyField@UseFlag{F}{Invisible}%
5574 \HyField@UseFlag{F}{Hidden}%
5575 \HyField@UseFlag{F}{Print}%
5576 \HyField@UseFlag{F}{NoZoom}%
5577 \HyField@UseFlag{F}{NoRotate}%
5578 \HyField@UseFlag{F}{NoView}%
5579 \HyField@UseFlag{F}{Locked}%
5580 \HyField@UseFlag{F}{ToggleNoView}%
5581 \HyField@UseFlag{F}{LockedContents}%
5582 \HyField@PrintFlags{F}{#1}%
5583 \bitsetIsEmpty{HyField@F}{%
5584 \let\Fld@annotflags\ltx@empty
5585 }{%
5586 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5587 }%
5588 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5589 \def\HyField@FlagsPushButton{%
5590 \HyField@FlagsAnnot{push button field}%
5591 \bitsetReset{HyField@Ff}%
5592 \HyField@UseFlag{Ff}{ReadOnly}%
5593 \HyField@UseFlag{Ff}{Required}%
5594 \HyField@UseFlag{Ff}{NoExport}%
5595 \HyField@SetFlag{Ff}{PushButton}%
5596 \HyField@PrintFlags{Ff}{push button field}%
5597 \bitsetIsEmpty{HyField@Ff}{%
5598 \let\Fld@flags\ltx@empty
5599 }{%
5600 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5601 }%
5602 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

5603 \def\HyField@FlagsCheckBox{%
5604 \HyField@FlagsAnnot{check box field}%
5605 \bitsetReset{HyField@Ff}%

```

```

5606 \HyField@UseFlag{Ff}{ReadOnly}%
5607 \HyField@UseFlag{Ff}{Required}%
5608 \HyField@UseFlag{Ff}{NoExport}%
5609 \HyField@PrintFlags{Ff}{checkbox field}%
5610 \bitsetIsEmpty{HyField@Ff}{%
5611   \let\Fld@flags\ltx@empty
5612 }{%
5613   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5614 }%
5615 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

5616 \def\HyField@FlagsRadioButton{%
5617   \HyField@FlagsAnnot{radio button field}%
5618   \bitsetReset{HyField@Ff}%
5619   \HyField@UseFlag{Ff}{ReadOnly}%
5620   \HyField@UseFlag{Ff}{Required}%
5621   \HyField@UseFlag{Ff}{NoExport}%
5622   \HyField@UseFlag{Ff}{NoToggleToOff}%
5623   \HyField@SetFlag{Ff}{Radio}%
5624   \HyField@UseFlag{Ff}{RadiosInUnison}%
5625   \HyField@PrintFlags{Ff}{radio button field}%
5626   \bitsetIsEmpty{HyField@Ff}{%
5627     \let\Fld@flags\ltx@empty
5628   }{%
5629     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5630   }%
5631 }

```

19.1.7 Text fields

\HyField@FlagsText

```

5632 \def\HyField@FlagsText{%
5633   \HyField@FlagsAnnot{text field}%
5634   \bitsetReset{HyField@Ff}%
5635   \HyField@UseFlag{Ff}{ReadOnly}%
5636   \HyField@UseFlag{Ff}{Required}%
5637   \HyField@UseFlag{Ff}{NoExport}%
5638   \HyField@UseFlag{Ff}{Multiline}%
5639   \HyField@UseFlag{Ff}{Password}%
5640   \HyField@UseFlag{Ff}{FileSelect}%
5641   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5642   \HyField@UseFlag{Ff}{DoNotScroll}%
5643   \ifFld@comb
5644     \ifcase0\ifFld@multiline
5645       \else\ifFld@password
5646       \else\ifFld@fileselect
5647       \else 1\fi\fi\fi\relax
5648   \Hy@Error{%
5649     Field option `comb' cannot be used together with\MessageBreak
5650     `multiline', `password', or `fileselect'%

```

```

5651     }\@ehc
5652     \else
5653     \HyField@UseFlag{Ff}{Comb}%
5654     \fi
5655     \fi
5656     \HyField@UseFlag{Ff}{RichText}%
5657     \HyField@PrintFlags{Ff}{text field}%
5658     \bitsetIsEmpty{HyField@Ff}{%
5659     \let\Fld@flags\tx@empty
5660     }{%
5661     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5662     }%
5663     }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

5664 \def\HyField@FlagsChoice{%
5665   \HyField@FlagsAnnot{choice field}%
5666   \bitsetReset{HyField@Ff}%
5667   \HyField@UseFlag{Ff}{ReadOnly}%
5668   \HyField@UseFlag{Ff}{Required}%
5669   \HyField@UseFlag{Ff}{NoExport}%
5670   \HyField@UseFlag{Ff}{Combo}%
5671   \ifFld@combo
5672     \HyField@UseFlag{Ff}{Edit}%
5673   \fi
5674   \HyField@UseFlag{Ff}{Sort}%
5675   \HyField@UseFlag{Ff}{MultiSelect}%
5676   \ifFld@combo
5677     \ifFld@edit
5678       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5679     \fi
5680   \fi
5681   \HyField@UseFlag{Ff}{CommitOnSelChange}%
5682   \HyField@PrintFlags{Ff}{choice field}%
5683   \bitsetIsEmpty{HyField@Ff}{%
5684   \let\Fld@flags\tx@empty
5685   }{%
5686   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5687   }%
5688   }

```

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.

```

5689 \def\HyField@PDFChoices#1{%
5690   \begingroup
5691   \global\let\Fld@choices\tx@empty
5692   \let\HyTmp@optlist\tx@empty

```

```

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

```

\HyField@@PDFChoices

```

5732 \def\HyField@@PDFChoices#1#2{%
5733   \ifx#2\relax
5734   \else
5735     \count@=0 %
5736     \def\HyTmp@optitem##1##2##3{%
5737       \def\HyTmp@key{##2}%
5738       \ifx\HyTmp@key\Hy@gtemp
5739         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5740           \HyTmp@optlist
5741           \HyTmp@optitem{##1}{##2}1%
5742         }%
5743       \let\HyTmp@found=Y%
5744     \else

```



```

5745     \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5746         \HyTmp@optlist
5747         \HyTmp@optitem{##1}{##2}##3%
5748     }%
5749     \fi
5750 }%
5751 \expandafter\comma@parse\expandafter{#2}{%
5752     \pdfstringdef\Hy@gtemp\comma@entry
5753     \let\HyTmp@found=N %
5754     \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5755     \HyTmp@optlist
5756     \ifx\HyTmp@found Y%
5757         \advance\count@ by 1 %
5758     \else
5759         \@onelevel@sanitize\comma@entry
5760         \PackageWarning{hyperref}{%
5761             \string\ChoiceBox: Ignoring value `\'comma@entry',%
5762             \MessageBreak
5763             it cannot be found in the choices%
5764         }%
5765     \fi
5766     \@gobble
5767 }%
5768 \def\HyTmp@optitem##1##2##3{%
5769     \ifnum##3=1 %
5770         (##2)%
5771     \fi
5772 }%
5773 \ifcase\count@
5774 \or
5775     \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5776 \else
5777     \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5778     \ifx#1V%
5779         \def\HyTmp@optitem##1##2##3{%
5780             \ifnum##3=1 %
5781                 \@firstofone{ ##1}%
5782             \fi
5783         }%
5784         \edef\HyTmp@optlist{\HyTmp@optlist}%
5785         \xdef\Fld@choices{%
5786             \Fld@choices
5787             /I[\expandafter\@firstofone\HyTmp@optlist]}%
5788         }%
5789     \fi
5790 \fi
5791 \fi
5792 }

```

19.3 Forms

\HyField@SetKeys

```

5793 \def\HyField@SetKeys{%
5794     \kvsetkeys{Field}%

```

```

5795 }

5796 \newif\ifFld@checked
5797 \newif\ifFld@disabled
5798 \Fld@checkedfalse
5799 \Fld@disabledfalse
5800 \newcount\Fld@menulength
5801 \newdimen\Field@Width
5802 \newdimen\Fld@charsize
5803 \Fld@charsize=10\p@
5804 \def\Fld@maxlen{0}
5805 \def\Fld@align{0}
5806 \def\Fld@color{0 0 0 rg}
5807 \def\Fld@bcolor{1 1 1}
5808 \def\Fld@bordercolor{1 0 0}
5809 \def\Fld@bordersep{1\p@}
5810 \def\Fld@borderwidth{1}
5811 \def\Fld@borderstyle{S}
5812 \def\Fld@cbsymbol{4}
5813 \def\Fld@radiosymbol{H}
5814 \def\Fld@rotation{0}
5815 \def\Fld@ifnextchar{\@ifnextchar{\@Form}\@Form[]}
5816 \def\Fld@endForm{\@endForm}
5817 \newif\ifForm@html
5818 \Form@htmlfalse
5819 \def\Fld@boolkey#1#2{%
5820   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5821 }
5822 \define@key{Form}{action}{%
5823   \hyper@normalise\Hy@DefFormAction{#1}%
5824 }
5825 \def\Hy@DefFormAction{\def\Fld@action}
5826 \def\enc@html{html}
5827 \define@key{Form}{encoding}{%
5828   \def\Hy@tempa{#1}%
5829   \ifx\Hy@tempa\enc@html
5830     \Form@htmltrue
5831     \def\Fld@export{html}%
5832   \else
5833     \Hy@Warning{%
5834       Form `encoding' key with \MessageBreak
5835       unknown value `#1'%
5836     }%
5837   \Form@htmlfalse
5838 }
5839 }
5840 \define@key{Form}{method}{%
5841   \lowercase{\def\Hy@temp{#1}}%
5842   \@ifundefined{Form@method@\Hy@temp}{%
5843     \@onelevel@sanitize\Hy@temp
5844     \Hy@Error{%
5845       Unknown method ``\Hy@temp'.\MessageBreak
5846       Known values are `post' and `get'%
5847     }\@ehc

```

```

5848 }{%
5849 \let\Form@method\Hy@temp
5850 \ifcase\@nameuse{Form@method@\Hy@temp} %
5851 \Fld@getmethodfalse
5852 \else
5853 \Fld@getmethodtrue
5854 \fi
5855 }%
5856 }
5857 \def\Form@method{}
5858 \@namedef{Form@method@post}{0}
5859 \@namedef{Form@method@get}{1}

5860 \newif\ifHyField@NeedAppearances
5861 \def\HyField@NeedAppearancesfalse{%
5862 \global\let\ifHyField@NeedAppearances\iffalse
5863 }
5864 \def\HyField@NeedAppearancetrue{%
5865 \global\let\ifHyField@NeedAppearances\iftrue
5866 }
5867 \HyField@NeedAppearancetrue
5868 \define@key{Form}{NeedAppearances}[true]{%
5869 \edef\Hy@tempa{#1}%
5870 \ifx\Hy@tempa\Hy@true
5871 \HyField@NeedAppearancetrue
5872 \else
5873 \ifx\Hy@tempa\Hy@false
5874 \HyField@NeedAppearancesfalse
5875 \else
5876 \Hy@Error{%
5877 Unexpected value ``\Hy@tempa'\MessageBreak
5878 of option `NeedAppearances' instead of\MessageBreak
5879 `true' or `false'%
5880 } \@ehc
5881 \fi
5882 \fi
5883 }
5884 \def\Field@boolkey#1#2{%
5885 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5886 }
5887 \ifHy@texht
5888 \newtoks\Field@toks
5889 \Field@toks={ }%
5890 \def\Field@addtoks#1#2{%
5891 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5892 \@processme
5893 }%
5894 \else
5895 \def\Hy@WarnHTMLFieldOption#1{%
5896 \Hy@Warning{%
5897 HTML field option `#1'\MessageBreak
5898 is ignored%
5899 }%
5900 }%
5901 \fi

```

```

5902 \def\Fld@checkequals#1=#2=#3\{\%
5903 \def\@currDisplay{#1}%
5904 \ifx\#2\%
5905 \def\@currValue{#1}%
5906 \else
5907 \def\@currValue{#2}%
5908 \fi
5909 \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
5910 }
5911 \define@key{Field}{loc}{%
5912 \def\Fld@loc{#1}%
5913 }
5914 \define@key{Field}{checked}[true]{%
5915 \lowercase{\Field@boolkey{#1}}{checked}%
5916 }
5917 \define@key{Field}{disabled}[true]{%
5918 \lowercase{\Field@boolkey{#1}}{disabled}%
5919 }
5920 \ifHy@texht
5921 \define@key{Field}{accesskey}{%
5922 \Field@addtoks{accesskey}{#1}%
5923 }%
5924 \define@key{Field}{tabkey}{%
5925 \Field@addtoks{tabkey}{#1}%
5926 }%
5927 \else
5928 \define@key{Field}{accesskey}{%
5929 \Hy@WarnHTMLFieldOption{accesskey}%
5930 }%
5931 \define@key{Field}{tabkey}{%
5932 \Hy@WarnHTMLFieldOption{tabkey}%
5933 }%
5934 \fi
5935 \define@key{Field}{name}{%
5936 \def\Fld@name{#1}%
5937 }
5938 \let\Fld@altname\relax
5939 \define@key{Field}{altname}{%
5940 \def\Fld@altname{#1}%
5941 }
5942 \let\Fld@mappingname\relax
5943 \define@key{Field}{mappingname}{%
5944 \def\Fld@mappingname{#1}%
5945 }
5946 \define@key{Field}{width}{%
5947 \def\Fld@width{#1}%
5948 \Field@Width#1\setbox0=\hbox{m}%
5949 }
5950 \define@key{Field}{maxlen}{%
5951 \def\Fld@maxlen{#1}%
5952 }
5953 \define@key{Field}{menulength}{%
5954 \Fld@menulength=#1\relax
5955 }

```

```

5956 \define@key{Field}{height}{%
5957   \def\Fld@height{#1}%
5958 }
5959 \define@key{Field}{charsize}{%
5960   \setlength{\Fld@charsize}{#1}%
5961 }
5962 \define@key{Field}{borderwidth}{%
5963   \Hy@defaultbp\Fld@borderwidth{#1}%
5964 }
5965 \def\Hy@defaultbp#1#2{%
5966   \begingroup
5967   \afterassignment\Hy@defaultbpAux
5968   \dimen@=#2bp\relax{#1}{#2}%
5969 }
5970 \def\Hy@defaultbpAux#1\relax#2#3{%
5971   \ifx!#1!%
5972     \endgroup
5973     \def#2{#3}%
5974   \else
5975     \edef\x{\endgroup
5976       \def\noexpand#2{%
5977         \strip@pt\dimexpr\dimen@*800/803\relax
5978       }%
5979     }\x
5980   \fi
5981 }%
5982 \define@key{Field}{borderstyle}{%
5983   \let\Hy@temp\Fld@borderstyle
5984   \def\Fld@borderstyle{#1}%
5985   \Hy@Match\Fld@borderstyle{}{%
5986     ~[SDBIU]$%
5987   }{}{%
5988     \Hy@Warning{%
5989       Invalid value `@\pdfborderstyle'\MessageBreak
5990       for option `pdfborderstyle'. Valid values:\MessageBreak
5991       \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
5992       \space\space I (Inset), U (Underline)\MessageBreak
5993       Option setting is ignored%
5994     }%
5995     \let\Fld@borderstyle\Hy@temp
5996   }%
5997 }
5998 \define@key{Field}{bordersep}{%
5999   \def\Fld@bordersep{#1}%
6000 }
6001 \define@key{Field}{default}{%
6002   \Hy@pdfstringdef\Fld@default{#1}%
6003 }
6004 \define@key{Field}{align}{%
6005   \def\Fld@align{#1}%
6006 }
6007 \define@key{Field}{value}{%
6008   \Hy@pdfstringdef\Fld@value{#1}%
6009 }

```

```

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

6043 \define@key{Field}{rotation}{%
6044 \def\Fld@rotation{#1}%
6045 }

6046 \define@key{Field}{backgroundcolor}{%
6047 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6048 }
6049 \define@key{Field}{bordercolor}{%
6050 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6051 }
6052 \define@key{Field}{color}{%
6053 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6054 }

6055 \let\Fld@onclick@code\ltx@empty
6056 \let\Fld@format@code\ltx@empty
6057 \let\Fld@validate@code\ltx@empty
6058 \let\Fld@calculate@code\ltx@empty
6059 \let\Fld@keystroke@code\ltx@empty
6060 \let\Fld@onfocus@code\ltx@empty
6061 \let\Fld@onblur@code\ltx@empty
6062 \let\Fld@onmousedown@code\ltx@empty

```

```

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

6090 \let\Fld@calculate@sortkey\ltx@empty
6091 \define@key{Field}{calculatesortkey}[1]{%
6092   \def\Fld@calculate@sortkey{#1}%
6093 }

6094 \ifHy@texht
6095   \def\Hy@temp#1{%
6096     \define@key{Field}{#1}{%
6097       \Field@addtoks{#1}{##1}%
6098     }%
6099   }%
6100 \else
6101   \def\Hy@temp#1{%
6102     \define@key{Field}{#1}{%
6103       \Hy@WarnHTMLFieldOption{#1}%
6104     }%
6105   }%
6106 \fi
6107 \Hy@temp{ondblclick}
6108 \Hy@temp{onmousedown}
6109 \Hy@temp{onmouseup}
6110 \Hy@temp{onmouseover}
6111 \Hy@temp{onmousemove}
6112 \Hy@temp{onmouseout}
6113 \Hy@temp{onkeydown}
6114 \Hy@temp{onkeyup}
6115 \Hy@temp{onselect}

```

```

6116 \Hy@temp{onchange}
6117 \Hy@temp{onkeypress}
6118 \ifHy@texht
6119 \define@key{Field}{onclick}{%
6120   \Field@addtoks{onclick}{#1}%
6121 }%
6122 \else
6123 \ifHy@pdfa
6124 \define@key{Field}{onclick}{%
6125   \Hy@Error{%
6126     PDF/A: Action `onclick' is prohibited%
6127   } \@ehc
6128 }%
6129 \else
6130 \define@key{Field}{onclick}{%
6131   \def\Fld@onclick@code{#1}%
6132 }%
6133 \fi
6134 \fi

6135 \DeclareRobustCommand\TextField{%
6136   \@ifnextchar[{\@TextField}{\@TextField[]}%
6137 }
6138 \DeclareRobustCommand\ChoiceMenu{%
6139   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6140 }
6141 \DeclareRobustCommand\CheckBox{%
6142   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6143 }
6144 \DeclareRobustCommand\PushButton{%
6145   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6146 }
6147 \DeclareRobustCommand\Gauge{%
6148   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6149 }
6150 \DeclareRobustCommand\Submit{%
6151   \@ifnextchar[{\@Submit}{\@Submit[]}%
6152 }
6153 \DeclareRobustCommand\Reset{%
6154   \@ifnextchar[{\@Reset}{\@Reset[]}%
6155 }
6156 \def\LayoutTextField#1#2{% label, field
6157   \def\Hy@temp{#1}%
6158   \ifx\Hy@temp\@empty
6159     #2%
6160   \else
6161     #1 #2%
6162   \fi
6163 }
6164 \def\LayoutChoiceField#1#2{% label, field
6165   \def\Hy@temp{#1}%
6166   \ifx\Hy@temp\@empty
6167     #2%
6168   \else
6169     #1 #2%

```



```

6170 \fi
6171 }
6172 \def\LayoutCheckField#1#2{% label, field
6173 \def\Hy@temp{#1}%
6174 \ifx\Hy@temp\@empty
6175 #2%
6176 \else
6177 #1 #2%
6178 \fi
6179 }
6180 \def\LayoutPushButtonField#1{% button
6181 #1%
6182 }
6183 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6184 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6185 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6186 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6187 \def\MakeButtonField#1{%
6188 \sbox0{%
6189 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6190 }%
6191 \@tempdima\ht0 %
6192 \advance\@tempdima by \Fld@borderwidth bp %
6193 \advance\@tempdima by \Fld@borderwidth bp %
6194 \ht0\@tempdima
6195 \@tempdima\dp0 %
6196 \advance\@tempdima by \Fld@borderwidth bp %
6197 \advance\@tempdima by \Fld@borderwidth bp %
6198 \dp0\@tempdima
6199 \box0\relax
6200 }
6201 \def\DefaultHeightofSubmit{14pt}
6202 \def\DefaultWidthofSubmit{2cm}
6203 \def\DefaultHeightofReset{14pt}
6204 \def\DefaultWidthofReset{2cm}
6205 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6206 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6207 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6208 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6209 \def\DefaultHeightofText{\normalbaselineskip}
6210 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6211 \def\DefaultWidthofText{3cm}
6212 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6213 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6214 \def\DefaultOptionsofPushButton{print}
6215 \def\DefaultOptionsofCheckBox{print}
6216 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6217 \def\DefaultOptionsofListBox{print}
6218 \def\DefaultOptionsofComboBox{print,edit,sort}
6219 \def\DefaultOptionsofPopdownBox{print}
6220 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```
6221 \ifHy@hyperfigures
6222 \Hy@Info{Hyper figures ON}%
6223 \else
6224 \Hy@Info{Hyper figures OFF}%
6225 \fi
6226 \ifHy@nesting
6227 \Hy@Info{Link nesting ON}%
6228 \else
6229 \Hy@Info{Link nesting OFF}%
6230 \fi
6231 \ifHy@hyperindex
6232 \Hy@Info{Hyper index ON}%
6233 \else
6234 \Hy@Info{Hyper index OFF}%
6235 \fi
6236 \ifHy@backref
6237 \Hy@Info{backreferencing ON}%
6238 \else
6239 \Hy@Info{backreferencing OFF}%
6240 \fi
6241 \ifHy@colorlinks
6242 \Hy@Info{Link coloring ON}%
6243 \else
6244 \Hy@Info{Link coloring OFF}%
6245 \fi
6246 \ifHy@ocgcolorlinks
6247 \Hy@Info{Link coloring with OCG ON}%
6248 \else
6249 \Hy@Info{Link coloring with OCG OFF}%
6250 \fi
6251 \ifHy@pdfa
6252 \Hy@Info{PDF/A mode ON}%
6253 \else
6254 \Hy@Info{PDF/A mode OFF}%
6255 \fi
```

21 Low-level utility macros

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

```
6256 \edef\hyper@hash{\string#}
6257 \edef\hyper@tilde{\string~}
6258 \edef\hyper@quote{\string"}
```

Support \label before \begin{document}.

```
6259 \def\@currentHref{Doc-Start}
6260 \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.

```
6261 \Hy@AtBeginDocument{%
6262 \Hy@pdfstringtrue
6263 \PDF@SetupDoc
```

```

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

```

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

```

6292 \@ifundefined{@kernel@ref}
6293 {\LetLtxMacro\NoHy@OrgRef\ref
6294 \DeclareRobustCommand*{\ref}{%
6295 \ifstar\NoHy@OrgRef\NoHy@OrgRef
6296 }
6297 \LetLtxMacro\NoHy@OrgPageRef\pageref
6298 \DeclareRobustCommand*{\pageref}{%
6299 \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6300 }{}

```

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.

```

6301 \def\NoHyper{%
6302 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6303 \def\hyper@anchor##1##2{##2\Hy@xspace@end}%
6304 \global\let\hyper@livelink\hyper@link
6305 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6306 \let\hyper@anchor\ltx@gobble

```

```

6307 \let\hyper@anchorstart\ltx@gobble
6308 \def\hyper@anchorend{\Hy@xspace@end}%
6309 \let\hyper@linkstart\ltx@gobbletwo
6310 \def\hyper@linkend{\Hy@xspace@end}%
6311 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6312 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6313 \let\Hy@backout\@gobble
6314 }
6315 \def\stop@hyper{%
6316 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6317 \let\Hy@backout\@gobble
6318 \let\hyper@@anchor\ltx@gobble
6319 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6320 \let\hyper@anchor\ltx@gobble
6321 \let\hyper@anchorstart\ltx@gobble
6322 \def\hyper@anchorend{\Hy@xspace@end}%
6323 \let\hyper@linkstart\ltx@gobbletwo
6324 \def\hyper@linkend{\Hy@xspace@end}%
6325 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6326 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6327 }
6328 \def\endNoHyper{%
6329 \global\let\hyper@link\hyper@livelink
6330 }
6331 </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:

```

6332 (*nohyperref)
6333 \RequirePackage{letltxmacro}[2008/06/13]
6334 \let\hyper@@anchor\@gobble
6335 \def\hyper@link#1#2#3{#3}%
6336 \let\hyper@anchorstart\@gobble
6337 \let\hyper@anchorend\@empty
6338 \let\hyper@linkstart\@gobbletwo
6339 \let\hyper@linkend\@empty
6340 \def\hyper@linkurl#1#2{#1}%
6341 \def\hyper@linkfile#1#2#3{#1}%
6342 \def\hyper@link@[#1]#2#3{#1}%
6343 \let\PDF@SetupDoc\@empty
6344 \let\PDF@FinishDoc\@empty
6345 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6346 \def\Acrobatmenu#1#2{\leavevmode#2}
6347 \let\pdfstringdefDisableCommands\@gobbletwo
6348 \let\texorpdfstring\@firstoftwo

```

```

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

```

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

```

6363 \if@t@r\fmtversion{2022-06-01}
6364 }%
6365 {%
6366   \LetLtxMacro\NoHy@OrgRef\ref
6367   \DeclareRobustCommand*\ref}{%
6368     \ifstar\NoHy@OrgRef\NoHy@OrgRef
6369   }
6370   \LetLtxMacro\NoHy@OrgPageRef\pageref
6371   \DeclareRobustCommand*\pageref}{%
6372     \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6373   }%
6374 }
6375 </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}`

```

6376 (*package)
6377 \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.

```

6378   \if@filesw
6379     \immediate\write\@auxout{%
6380       \string\providecommand\string\HyperFirstAtBeginDocument{%
6381         \string\AtBeginDocument}^^J%
6382       \string\HyperFirstAtBeginDocument{%
6383         \string\ifx\string\hyper@anchor\string\@undefined^^J%
6384         \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6385         \string\gdef\string\newlabel\string#1\string#2{%
6386           \string\newlabelxx{\string#1}\string#2}^^J%
6387         \string\gdef\string\newlabelxx%

```

```

6388     \string#1\string#2\string#3\string#4\string#5\string#6{%
6389     \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.

```

6390     \string\AtEndDocument{%
6391     \string\ifx\string\hyper@anchor\string\@undefined^^J%
6392     \string\let\string\newlabel\string\oldnewlabel^^J%
6393     \string\fi%
6394     }^^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.

```

6395     \string\fi%
6396     }^^J%
6397     \string\global\string\let\string\hyper@last\relax^^J%
6398     \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6399     }%
6400     \fi
6401     \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.

```

6402     \ifx\hyper@last\@undefined
6403     \def\newlabel#1#2{\@newlabel r{#1}{#2}{-}{-}}%
6404     \fi
6405     }

```

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.

```

6406 \ifHy@pdfusetitle
6407 \let\HyOrg@title\title
6408 \let\HyOrg@author\author
6409 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6410 \def\Hy@scanopttitle[#1]{%
6411 \gdef\Hy@title{#1}%
6412 \HyOrg@title{#1}%
6413 }%
6414 \def\Hy@scantitle#1{%
6415 \gdef\Hy@title{#1}%
6416 \HyOrg@title{#1}%
6417 }%
6418 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6419 \def\Hy@scanoptauthor[#1]{%
6420 \gdef\Hy@author{#1}%
6421 \HyOrg@author{#1}%
6422 }%
6423 \def\Hy@scanauthor#1{%
6424 \gdef\Hy@author{#1}%

```

```

6425 \HyOrg@author{#1}%
6426 }%

```

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.

```

6427 \begingroup
6428 \def\process@me#1\@nil#2{%
6429 \expandafter\let\expandafter\x\csname @#2\endcsname
6430 \edef\y{\expandafter\strip@prefix\meaning\x}%
6431 \def\c##1##2\@nil{%
6432 \ifx\\##1\\%
6433 \else
6434 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6435 \expandafter{\x}%
6436 \fi
6437 }%
6438 \expandafter\c\y\relax#1\@nil
6439 }%
6440 \expandafter\process@me\string\@latex@\@nil{title}%
6441 \expandafter\process@me\string\@latex@\@nil{author}%
6442 \endgroup
6443 \fi
6444 \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 ¹emoves its argument.

```

6445 \def\Hy@UseMaketitleString#1{%
6446 \ltx@ifundefined{Hy@#1}{-}{%
6447 \begingroup
6448 \let\Hy@saved@hook\pdfstringdefPreHook
6449 \pdfstringdefDisableCommands{%
6450 \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
6451 \let\newline\\%
6452 \def\and{;}%
6453 \let\thanks\@gobble%
6454 }%
6455 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6456 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6457 \csname Hy@#1\endcsname\@empty
6458 }%
6459 \fi
6460 \global\let\pdfstringdefPreHook\Hy@saved@hook
6461 \endgroup
6462 }%
6463 }

```

```

6464 \def\Hy@newline@title#1{ #1}
6465 \def\Hy@newline@author#1{, #1}
6466 \def\Hy@UseMaketitleInfos{%
6467 \Hy@UseMaketitleString{title}%
6468 \Hy@UseMaketitleString{author}%
6469 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

6470 \RequirePackage{atbegshi}[2007/09/09]
6471 \let\Hy@EveryPageHook\ltx@empty
6472 \let\Hy@EveryPageBoxHook\ltx@empty
6473 \let\Hy@FirstPageHook\ltx@empty
6474 \AtBeginShipout{%
6475 \Hy@EveryPageHook
6476 \ifx\Hy@EveryPageBoxHook\ltx@empty
6477 \else
6478 \setbox\AtBeginShipoutBox=\vbox{%
6479 \offinterlineskip
6480 \Hy@EveryPageBoxHook
6481 \box\AtBeginShipoutBox
6482 }%
6483 \fi
6484 }
6485 \ltx@iffileloaded{hpdftex.def}{%
6486 \AtBeginShipout{%
6487 \Hy@FirstPageHook
6488 \global\let\Hy@FirstPageHook\ltx@empty
6489 }%
6490 }{%
6491 \AtBeginShipoutFirst{%
6492 \Hy@FirstPageHook
6493 }%
6494 }
6495 \g@addto@macro\Hy@FirstPageHook{%
6496 \PDF@FinishDoc
6497 \global\let\PDF@FinishDoc\ltx@empty
6498 }

```

27.1 PDF /PageLabels

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

```

6499 \ifHy@pdfpagelabels
6500 \begingroup\expandafter\expandafter\expandafter\endgroup
6501 \expandafter\ifx\csname thepage\endcsname\relax
6502 \Hy@pdfpagelabelsfalse
6503 \Hy@WarningNoLine{%
6504 Option `pdfpagelabels' is turned off\MessageBreak

```



```

6505     because \string\thepage\space is undefined%
6506   }%
6507   \csname fi\endcsname
6508   \csname iffalse\expandafter\endcsname
6509   \fi

```

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

```

6510   \def\thispdfpagelabel#1{%
6511     \gdef\HyPL@thisLabel{#1}%
6512   }%
6513   \global\let\HyPL@thisLabel\relax

```

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

```

6514   \let\HyPL@Labels\ltx@empty

```

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

```

6515   \newcount\Hy@abspage
6516   \Hy@abspage=0 %

```

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

```

6517   \def\HyPL@LastType{init}%
6518   \def\HyPL@LastNumber{0}%
6519   \let\HyPL@LastPrefix\ltx@empty

```

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

```

6520   \def\HyPL@arabic{D}%
6521   \def\HyPL@Roman{R}%
6522   \def\HyPL@roman{r}%
6523   \def\HyPL@Alph{A}%
6524   \def\HyPL@alph{a}%

6525   \let\HyPL@SlidesSetPage\ltx@empty
6526   \ltx@ifclassloaded{slides}{%
6527     \def\HyPL@SlidesSetPage{%
6528       \advance\c@page\ltx@one
6529       \ifnum\value{page}>\ltx@one
6530         \protected@edef\HyPL@SlidesOptionalPage{%
6531           \Hy@SlidesFormatOptionalPage{\thepage}%
6532         }%
6533       \else
6534         \let\HyPL@SlidesOptionalPage\ltx@empty
6535       \fi
6536       \advance\c@page-\ltx@one
6537     \def\HyPL@page{%
6538       \csname the\Hy@SlidesPage\endcsname
6539       \HyPL@SlidesOptionalPage
6540     }%
6541   }%
6542   }{}%

```

`\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.

```

6543 \def\HyPL@EveryPage{%
6544   \begingroup
6545   \ifx\HyPL@thisLabel\relax
6546     \let\HyPL@page\thepage
6547     \HyPL@SlidesSetPage
6548   \else
6549     \let\HyPL@page\HyPL@thisLabel
6550     \global\let\HyPL@thisLabel\relax
6551   \fi
6552   \let\HyPL@Type\relax
6553   \ifnum\c@page>0 %
6554     \ifx\HyPL@SlidesSetPage\ltx@empty
6555       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6556     \fi
6557   \fi
6558   \let\Hy@temp Y%
6559   \ifx\HyPL@Type\HyPL@LastType
6560   \else
6561     \let\Hy@temp N%
6562   \fi
6563   \ifx\HyPL@Type\relax
6564     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6565   \else
6566     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6567   \fi
6568   \ifx\HyPL@Prefix\HyPL@LastPrefix
6569   \else
6570     \let\Hy@temp N%
6571   \fi
6572   \if Y\Hy@temp
6573     \advance\c@page by -1 %
6574     \ifnum\HyPL@LastNumber=\the\c@page\relax
6575     \else
6576       \let\Hy@temp N%
6577     \fi
6578     \Hy@StepCount\c@page
6579   \fi
6580   \if N\Hy@temp
6581     \ifx\HyPL@Type\relax
6582       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6583     \else
6584       \HyPL@StorePageLabel{%
6585         \ifx\HyPL@Prefix\@empty
6586         \else
6587           /P(\HyPL@Prefix)%
6588         \fi
6589         /S/\csname HyPL\HyPL@Type\endcsname
6590         \ifnum\the\c@page=1 %
6591         \else
6592           \space/St \the\c@page
6593         \fi
6594       }%
6595     \fi
6596   \fi

```

```

6597 \xdef\HyPL@LastNumber{\the\c@page}%
6598 \global\let\HyPL@LastType\HyPL@Type
6599 \global\let\HyPL@LastPrefix\HyPL@Prefix
6600 \endgroup
6601 \Hy@GlobalStepCount\Hy@abspage
6602 }%

```

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

```

6603 \def\HyPL@CheckThePage#1@nil{%
6604 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page@nil
6605 }%

```

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

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

```

6606 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4@nil{%
6607 \def\Hy@tempa{#4}%
6608 \def\Hy@tempb{\csname\endcsname\c@page}%
6609 \ifx\Hy@tempa\Hy@tempb
6610 \expandafter\ifx\csname HyPL#3\endcsname\relax
6611 \else
6612 \def\HyPL@Type{#3}%
6613 \def\HyPL@Prefix{#2}%
6614 \fi
6615 \else
6616 \begingroup
6617 \let\Hy@next\endgroup
6618 \let\HyPL@found@undefined
6619 \def\arabic{\HyPL@Format{arabic}}%
6620 \def\Roman{\HyPL@Format{Roman}}%
6621 \def\roman{\HyPL@Format{roman}}%
6622 \def\Alph{\HyPL@Format{Alph}}%
6623 \def\alph{\HyPL@Format{alph}}%
6624 \protected@edef\Hy@temp{#1}%
6625 \ifx\HyPL@found\relax
6626 \toks@{\expandafter{\Hy@temp}}%
6627 \edef\Hy@next{\endgroup
6628 \noexpand\HyPL@@@CheckThePage\the\toks@
6629 \noexpand\HyPL@found\relax\noexpand@nil
6630 }%
6631 \fi
6632 \Hy@next
6633 \fi
6634 }%

```

`\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`.

```

6635 \def\HyPL@Format#1#2{%
6636 \ifx\HyPL@found@undefined
6637 \expandafter\ifx\csname c@#2\endcsname\c@page
6638 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%

```

```

6639   \else
6640     \expandafter\noexpand\csname#1\endcsname{#2}%
6641   \fi
6642   \else
6643     \expandafter\noexpand\csname#1\endcsname{#2}%
6644   \fi
6645 }%

```

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

```

6646 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6647   \def\Hy@tempa{#3}%
6648   \def\Hy@tempb{\HyPL@found\relax}%
6649   \ifx\Hy@tempa\Hy@tempb
6650     \def\HyPL@Type{#2}%
6651     \def\HyPL@Prefix{#1}%
6652   \fi
6653 }%

```

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

```

6654 \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`.

```

6655 \def\HyPL@Useless{0<</S/D>>}%
6656 \@onelevel@sanitize\HyPL@Useless

```

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

```

6657 \def\HyPL@SetPageLabels{%
6658   \@onelevel@sanitize\HyPL@Labels
6659   \ifx\HyPL@Labels\@empty
6660     \else
6661     \ifx\HyPL@Labels\HyPL@Useless
6662     \else
6663     \Hy@PutCatalog{/PageLabels<</Nums{\HyPL@Labels}>>}%
6664   \fi
6665   \fi
6666 }%

6667 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6668 \fi

```

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

```

6669 \Hy@DisableOption{pdfpagelabels}
6670 \</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`

```
6671 (*pdfTeX)
6672 \pdf@ifdraftmode{%
6673   \let\Hy@PutCatalog\ltx@gobble
6674 }{%
6675   \let\Hy@PutCatalog\pdfcatalog
6676 }
6677 </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.

```
6678 (*vtex)
6679 \providecommand*\XR@ext}{pdf}
6680 \edef\Hy@VTeXversion{%
6681   \ifx\VTeXversion\@undefined
6682     \z@
6683   \else
6684     \ifx\VTeXversion\relax
6685       \z@
6686     \else
6687       \VTeXversion
6688     \fi
6689   \fi
6690 }
6691 \begingroup
6692   \ifnum\Hy@VTeXversion<660 %
6693     \gdef\Hy@PutCatalog#1{%
6694       \Hy@WarningNoLine{%
6695         VTeX 6.59g or above required for pdfpagelabels%
6696       }%
6697     }%
6698   \else
6699     \gdef\Hy@PutCatalog#1{%
6700       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6701     }%
6702     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6703       \ifx\#2\%
6704         \else
6705           \immediate\special{!pdfpagelabels #2}%
6706         \fi
6707       }%
6708     \fi
6709   \endgroup
6710 </vtex>
6711 (*pdfTeX | vtex)
```

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

```
6712 \ifHy@pdfpagelabels
6713   \def\HyPL@StorePageLabel#1{%
6714     \toks@\expandafter{\HyPL@Labels}%
```

```

6715 \xdef\HyPL@Labels{%
6716 \the\toks@
6717 \the\Hy@abspage<<#1>>%
6718 }%
6719 }%

```

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.

```

6720 \RequirePackage{atveryend}[2009/12/07]%
6721 \AtVeryEndDocument{%
6722 \HyPL@SetPageLabels
6723 }%

6724 \fi
6725 </pdfTeX | vtex>

```

27.1.2 xetex

```

6726 < *xetex >
6727 \HyPsd@LoadUnicode
6728 \Hy@unicodetrue
6729 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6730 \else
6731 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6732 \fi
6733 \HyPsd@LoadStringEnc
6734 \define@key{Hyp}{unicode}[true]{%
6735 \Hy@boolkey{unicode}{#1}%
6736 \ifHy@unicode
6737 \else
6738 \Hy@Warning{%
6739 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
6740 option setting `unicode=false'%
6741 }%
6742 \Hy@unicodetrue
6743 \fi
6744 }
6745 \define@key{Hyp}{pdfencoding}{%
6746 \edef\HyPsd@temp{#1}%
6747 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6748 \let\HyPsd@pdfencoding\HyPsd@temp
6749 \else
6750 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6751 \let\HyPsd@pdfencoding\HyPsd@temp
6752 \else
6753 \Hy@Warning{%
6754 XeTeX driver only supports\MessageBreak
6755 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6756 setting `pdfencoding=\HyPsd@temp'%
6757 }%
6758 \fi
6759 \fi
6760 }

```

```
6761 \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:

```
6762 \def\setpdfinkmargin#1{%
6763   \begingroup
6764   \setlength{\dimen@}{#1}%
6765   \special{dvipdfmx:config g \strip@pt\dimen@}%
6766   \endgroup}
6767 \</xetex>
```

set the pdf version

```
6768 \<dvipdfm | xetex>
6769 \special{pdf:majorversion \Hy@pdf@majorversion}
6770 \special{pdf:minorversion \Hy@pdf@minorversion}
6771 \</dvipdfm | xetex>
```

27.1.3 pdfmarkbase, dvipdfm, xetex

```
6772 \<pdfmarkbase>
6773 \begingroup
6774 \<ifundefined{headerps@out}{}{}%
6775 \toks@\<expandafter{\Hy@FirstPageHook}%
6776 \xdef\Hy@FirstPageHook{%
6777   \noexpand\headerps@out{%
6778     systemdict /pdfmark known%
6779     {%
6780       userdict /?pdfmark systemdict /exec get put%
6781     }{%
6782       userdict /?pdfmark systemdict /pop get put %
6783       userdict /pdfmark systemdict /cleartomark get put%
6784     }%
6785   ifelse%
6786 }%
6787 \the\toks@
6788 }%
6789 }%
6790 \endgroup
6791 \</pdfmarkbase>
```

\Hy@PutCatalog

```
6792 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\<pdfm@mark{docview <<#1>>}}
6793 \<pdfmarkbase>
6794 \def\Hy@PutCatalog#1{%
6795   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
6796 }
6797 \</pdfmarkbase>

6798 \<pdfmarkbase | dvipdfm | xetex>
6799 \ifHy@pdfpagelabels
```

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

```
6800 \def\HyPL@StorePageLabel#1{%
6801   \iffiles
6802   \begingroup
6803   \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6804   \immediate\write\@mainaux{%
```

```

6805     \string\HyPL@Entry{\Hy@tempa}%
6806     }%
6807   \endgroup
6808   \fi
6809 }%

```

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.

```

6810 \Hy@AtBeginDocument{%
6811   \if@filesw
6812     \immediate\write\@mainaux{%
6813       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6814     }%
6815   \fi
6816   \ifx\HyPL@Labels\@empty
6817     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6818   \else
6819     \HyPL@SetPageLabels
6820   \fi
6821   \let\HyPL@Entry\@gobble
6822 }%

```

`\HyPL@Entry`

```

6823 \def\HyPL@Entry#1{%
6824   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6825     \HyPL@Labels
6826     #1%
6827   }%
6828 }%

6829 \fi
6830 </pdfmarkbase | dvipdfm | xetex>

6831 <*\packageEnd>

6832 \ifx\MaybeStopEarly\relax
6833 \else
6834   \Hy@stoppedearlytrue
6835   \expandafter\MaybeStopEarly
6836 \fi
6837 \Hy@stoppedearlyfalse

```

28 Automated L^AT_EX hypertext cross-references

Anything which can be referenced advances some counter; we overload this to put in a hypertext starting point (with no visible anchor), and make a note of that for later use in `\label`. This will fail badly if `\theH<name>` does not expand to a sensible reference. This means that classes or package which introduce new elements need to define an equivalent `\theH<name>` for every `\the<name>`. We do make a trap to make `\theH<name>` be the same as `\arabic{<name>}`, if `\theH<name>` is not defined, but this is not necessarily a good idea. Alternatively, the ‘naturalnames’ option uses whatever L^AT_EX provides, which may be useable.

But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertextnames=false’ option just makes up arbitrary names.

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

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

Start with a fallback for equations

```

6838 \def\Hy@CounterExists#1{%
6839   \begingroup\expandafter\expandafter\expandafter\endgroup
6840   \expandafter\ifx\csname c@#1\endcsname\relax
6841     \expandafter\@gobble
6842   \else
6843     \begingroup\expandafter\expandafter\expandafter\endgroup
6844     \expandafter\ifx\csname the#1\endcsname\relax
6845       \expandafter\expandafter\expandafter\@gobble
6846     \else
6847       \expandafter\expandafter\expandafter\@firstofone
6848     \fi
6849   \fi
6850 }
6851 \Hy@CounterExists{section}{%
6852   \providecommand\theHequation{\theHsection.\arabic{equation}}%
6853 }
6854 \providecommand\theHequation{\arabic{equation}}%
6855 \Hy@CounterExists{part}{%
6856   \providecommand\theHpart{\arabic{part}}%
6857 }
6858 \ltx@ifundefined{thechapter}{%
6859   \providecommand\theHsection   {\arabic{section}}%
6860   \providecommand\theHfigure    {\arabic{figure}}%
6861   \providecommand\theHtable     {\arabic{table}}%
6862 }{%
6863   \providecommand\theHchapter   {\arabic{chapter}}%
6864   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}%
6865   \providecommand\theHtable     {\theHchapter.\arabic{table}}%
6866   \providecommand\theHsection   {\theHchapter.\arabic{section}}%
6867 }
6868 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
6869 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6870 \providecommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
6871 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6872 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
6873 \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.

```

6874 \let\H@item\item
6875 \newcounter{Item}
6876 \def\theHItem{\arabic{Item}}

```

```

6877 \def\item{%
6878   \@hyper@itemfalse
6879   \if@nmbrrlist\@hyper@itemtrue\fi
6880   \H@item
6881 }

6882 \providecommand\theHenumi   {\theHItem}
6883 \providecommand\theHenumii  {\theHItem}
6884 \providecommand\theHenumiii {\theHItem}
6885 \providecommand\theHenumiv  {\theHItem}
6886 \providecommand\theHHfootnote {\arabic{Hfootnote}}
6887 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
6888 \@ifundefined{theHHmpfootnote}{%
6889   \let\theHHmpfootnote\theHHfootnote
6890 }-{}

```

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.

```

6891 \let\H@refstepcounter\refstepcounter
6892 \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`

```

6893 \newif\if@hyper@item
6894 \newif\if@skiphyperref
6895 \@hyper@itemfalse
6896 \@skiphyperreffalse
6897 \ExplSyntaxOn
6898 \def\refstepcounter#1{%
6899   \legacy_if:nF {Hy@pdfstring}
6900   {
6901     \H@refstepcounter{#1}%
6902     \bool_lazy_and:nnT
6903       { \l__hyp_target_create_bool }
6904       { ! \legacy_if_p:n{@skiphyperref} }
6905     {
6906       \legacy_if:nTF {@hyper@item}
6907       {
6908         \stepcounter{Item}%
6909         \hyper@refstepcounter{Item}%
6910         \@hyper@itemfalse
6911       }
6912       {
6913         \hyper@refstepcounter{#1}%
6914       }
6915     }
6916   }
6917 }
6918 \ExplSyntaxOff
6919 \let\Hy@saved@refstepcounter\refstepcounter

```

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

```
6920 \newif\ifmeasuring@\measuring@false
6921 \newcommand\Hy@ifnotmeasuring[1]{#1}
6922 \AddToHook{package/amsmath/after}
6923 {
6924   \renewcommand\Hy@ifnotmeasuring[1]
6925     {\ifmeasuring@ \else #1\fi}
6926 }
```

`\hyper@refstepcounter`

```
6927 \def\hyper@refstepcounter#1{%
6928   \HyCnt@ProvideTheHCounter{#1}%
6929   \hyper@makecurrent{#1}%
6930   \Hy@ifnotmeasuring
6931     {\Hy@raisedlink{%
6932       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6933       }}%
6934 }
```

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

```
6935 \def\HyCnt@ProvideTheHCounter#1{%
6936   \@ifundefined{theH#1}{%
6937     \expandafter\def\csname theH#1\endcsname{}%
6938     \def\Hy@temp{\@elt{#1}}%
6939     \ltx@onelevel@sanitize\Hy@temp
6940     \let\HyOrg@elt\@elt
6941     \edef\@elt{%
6942       \noexpand\HyCnt@LookForParentCounter
6943       \expandafter\noexpand\csname theH#1\endcsname
6944     }%
6945     \cl@ckpt
6946     \let\@elt\HyOrg@elt
6947     \expandafter
6948     \ltx@LocalAppendToMacro\csname theH#1\endcsname
6949     \expandafter{%
6950       \expandafter\@arabic\csname c@#1\endcsname
6951     }%
6952   }-%
6953 }
```

`\Hy@LookForParentCounter`

```
6954 \def\HyCnt@LookForParentCounter#1#2{%
6955   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
6956   \ltx@ifundefined{cl@#2}{%
6957     }-%
```

```

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

```

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`.

```

6977 \begingroup\expandafter\expandafter\expandafter\endgroup
6978 \expandafter\ifx\csname chapter\endcsname\relax
6979 \def\Hy@chapterstring{section}%
6980 \else
6981 \def\Hy@chapterstring{chapter}%
6982 \fi
6983 \def\Hy@appendixstring{appendix}
6984 \def\Hy@chapapp{\Hy@chapterstring}
6985 \ltx@ifundefined{appendix}{%
6986 }{%
6987 \let\HyOrg@appendix\appendix
6988 \def\Hy@AlphNoErr#1{%
6989 \ifnum\value{#1}>26 %
6990 Alph\number\value{#1}%
6991 \else
6992 \ifnum\value{#1}<1 %
6993 Alph\number\value{#1}%
6994 \else
6995 \Alph{#1}%
6996 \fi
6997 \fi
6998 }%
6999 \def\appendix{%
7000 \ltx@ifundefined{chapter}{%
7001 \gdef\theHsection{\Hy@AlphNoErr{section}}%
7002 }{%
7003 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7004 }%

```

```

7005 \xdef\Hy@chapapp{\Hy@appendixstring}%
7006 \HyOrg@appendix
7007 }%
7008 }

```

\Hy@Test@alph

```

7009 \def\Hy@Test@alph#1{%
7010 \ifcase#1\or
7011 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7012 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7013 u\or v\or w\or x\or y\or z%
7014 \else
7015 \@ctrerr
7016 \fi
7017 }

```

\Hy@Test@Alph

```

7018 \def\Hy@Test@Alph#1{%
7019 \ifcase#1\or
7020 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7021 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7022 U\or V\or W\or X\or Y\or Z%
7023 \else
7024 \@ctrerr
7025 \fi
7026 }

```

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

```

7027 \NewHook{__hyp/target/setname }
7028 \define@key{Hyp}{next-anchor}{%
7029 \AddToHookNext{__hyp/target/setname}%
7030 {\Hy@MakeCurrentHref{#1}}%
7031 }

```

\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.

```

7032 \def\hyper@makecurrent#1{%
7033 \begingroup
7034 \Hy@safe@activestru
7035 \edef\Hy@param{#1}%
7036 \ifx\Hy@param\Hy@chapterstring
7037 \let\Hy@param\Hy@chapapp
7038 \fi
7039 \ifHy@hypertextnames
7040 \let\@number\@firstofone
7041 \def\@fnsymbol##1{fnsymbol\number##1}%
7042 \def\@arabic##1{\number##1}%
7043 \ifx\@alph\Hy@Test@alph
7044 \else
7045 \def\@alph{alph\number}%
7046 \fi
7047 \ifx\@Alph\Hy@Test@Alph

```

```

7048 \else
7049 \def\@Alph{Alph\number}%
7050 \fi
7051 \ifHy@naturalnames
7052 \let\textlatin\@firstofone
7053 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7054 \else
7055 \xdef\HyperGlobalCurrentHref{%
7056 \csname
7057 the%
7058 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7059 #1%
7060 \endcsname
7061 }%
7062 \fi
7063 \xdef\HyperGlobalCurrentHref{%
7064 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7065 }%
7066 \else
7067 \Hy@GlobalStepCount\Hy@linkcounter
7068 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7069 \fi
7070 \endgroup
7071 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7072 \ifHy@localanchorname
7073 \let\@currentHref\HyperLocalCurrentHref
7074 \else
7075 \global\let\@currentHref\HyperGlobalCurrentHref
7076 \fi
7077 \UseHook{__hyp/target/setname}%
7078 }

```

`\Hy@MakeCurrentHref`

```

7079 \def\Hy@MakeCurrentHref#1{%
7080 \edef\HyperLocalCurrentHref{#1}%
7081 \@onelevel@sanitize\HyperLocalCurrentHref
7082 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7083 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7084 \ifHy@localanchorname
7085 \let\@currentHref\HyperLocalCurrentHref
7086 \else
7087 \global\let\@currentHref\HyperGlobalCurrentHref
7088 \fi
7089 }

```

`\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.

```

7090 \def\Hy@MakeCurrentHrefAuto#1{%
7091 \Hy@GlobalStepCount\Hy@linkcounter
7092 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7093 \UseHook{__hyp/target/setname}}

```

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

```
7094 \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.

```
7095 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
```

```
7096 \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:

```
7097 \@ifpackageloaded{titlesec}{%
7098   \def\ttl@Hy@steplink#1{%
7099     \Hy@MakeCurrentHrefAuto{#1*}%
7100     \edef\ttl@Hy@saveanchor{%
7101       \noexpand\Hy@raisedlink{%
7102         \noexpand\hyper@anchorstart{\@currentHref}%
7103         \noexpand\hyper@anchorend
7104         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7105         \noexpand\ttl@Hy@PatchSaveWrite
7106       }%
7107     }%
7108   }%
7109   \def\ttl@Hy@PatchSaveWrite{%
7110     \begingroup
7111     \toks@\expandafter{\ttl@savewrite}%
7112     \edef\x{\endgroup
7113       \def\noexpand\ttl@savewrite{%
7114         \let\noexpand\@currentHref
7115         \noexpand\ttl@Hy@SavedCurrentHref
7116         \the\toks@
7117       }%
7118     }%
7119     \x
7120   }%
7121   \def\ttl@Hy@refstepcounter#1{%
7122     \let\ttl@b\Hy@raisedlink
7123     \def\Hy@raisedlink##1{%
7124       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7125     }%
7126     \refstepcounter{#1}%
7127     \let\Hy@raisedlink\ttl@b
7128   }%
7129 }
```

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.

```
7130 \@if@t@r\fmtversion{2021-11-15}
7131 {}%
7132 {
7133   \AtBeginDocument{%
7134     \def\Hy@varioref@undefined{???}{??}{-}{-}}
7135   \@ifpackageloaded{varioref}{%
7136     \def\vref@pagenum#1#2{%
7137       \@ifundefined{r@#2}{%
7138         \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7139       }{}%
7140       \edef#1{\getpagerefnumber{#2}}%
7141     }%
7142   }{}
7143 }
7144 }
```

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

```
7145 \@ifpackageloaded{longtable}{%
7146   \@ifundefined{hyper@nopatch@longtable}{%
7147     \begingroup
7148     \def\y{\LT@array}%
7149     \@ifundefined{scr@LT@array}{%
7150       \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7151     }{\def\y{\scr@LT@array}}%
7152     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7153       \expandafter\endgroup
7154       \expandafter\def\y[#1]#2{%
7155         \H@refstepcounter{#1}%
7156         \hyper@makecurrent{table}%
7157         \let\Hy@LT@currentHref\@currentHref
7158         #2\@sharp###4%
7159       }%
7160     }%
7161     \expandafter\expandafter\expandafter\x\y[#{1}]{#2}\@nil
```

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

```
7162   \begingroup
7163   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7164     \endgroup
7165     \def\LT@start{%
7166       #1%
```



```

7167 \ifvoid\LT@foot#2\fi
7168 \let\@currentHref\Hy@LT@currentHref
7169 \Hy@raisedlink{%
7170   \hyper@anchorstart{\@currentHref}\hyper@anchorend
7171 }%
7172 #3%
7173 }%
7174 }%
7175 \expandafter\x\LT@start\@nil
7176 }{}
7177 }{}

```

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`

```

7178 \let\new@refstepcounter\refstepcounter
7179 \let\H@equation\equation
7180 \let\H@endequation\endequation
7181 \@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.

```

7182 \@ifpackageloaded{amsmath}{}{}%
7183 \def\equation{%
7184   \let\refstepcounter\H@refstepcounter
7185   \H@equation
7186   \hyper@makecurrent{equation}%

```

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

```

7187   \mathopen{%
7188     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7189   }%
7190   \let\refstepcounter\new@refstepcounter
7191 }%
7192 \def\endequation{%
7193   \ifx\Hy@raisedlink\ltx@empty
7194     \hyper@anchorend
7195   \else
7196     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7197   \fi
7198   \H@endequation
7199 }%
7200 }
7201 }{}

```

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.

```

7202 \newif\if@eqnstar
7203 \@eqnstarfalse
7204 \let\H@eqnarray\eqnarray
7205 \let\H@endeqnarray\endeqnarray
7206 \@ifundefined{hyper@npatch@mathenv}{%
7207   \def\eqnarray{%
7208     \let\Hy@reserved@a\relax
7209     \def\@currentHref{}%
7210     \H@eqnarray
7211     \if@eqnstar
7212     \else
7213       \ifx\\\@currentHref\\%
7214       \else
7215         \hyper@makecurrent{equation}%
7216         \mathopen{%
7217           \Hy@raisedlink{%
7218             \hyper@anchorstart{\@currentHref}\hyper@anchorend
7219           }%
7220         }%
7221       \fi
7222     \fi
7223   }
7224   \def\endeqnarray{%
7225     \H@endeqnarray
7226   }
7227 }{}

```

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.

```

7228 \@namedef{eqnarray*}{%
7229   \protected\def\@eqnrcr{\nonumber\@seqnrcr}\@eqnstartrue\eqnarray
7230 }
7231 \@namedef{endeqnarray*}{%
7232   \nonumber\endeqnarray\@eqnstarfalse
7233 }

```

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

```

7234 \ltx@ifundefined{subeqnarray}{-}{%
7235   \let\H@subeqnarray\subeqnarray
7236   \let\H@endsubeqnarray\endsubeqnarray
7237   \def\subeqnarray{%
7238     \let\Hy@reserved@a\relax
7239     \H@subeqnarray
7240     \hyper@makecurrent{equation}%
7241     \hyper@anchorstart{\@currentHref}{-}\hyper@anchorend
7242   }%
7243   \def\endsubeqnarray{%

```

```

7244 \H@endsubeqnarray
7245 }%
7246 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7247 }

```

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

```

7248 \def\make@stripped@name#1{%
7249 \begingroup
7250 \escapechar\m@ne
7251 \global\let\newname\@empty
7252 \protected@edef\Hy@tempa{#1}%
7253 \edef\@tempb{%
7254 \noexpand\@tfor\noexpand\Hy@tempa:=%
7255 \expandafter\strip@prefix\meaning\Hy@tempa
7256 }%
7257 \@tempb\do{%
7258 \if{\Hy@tempa\else
7259 \if}\Hy@tempa\else
7260 \xdef\newname{\newname\Hy@tempa}%
7261 \fi
7262 \fi
7263 }%
7264 \endgroup
7265 }

```

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.

```

7266 \AddToHook{cmd/subequations/before}
7267 {%
7268 \stepcounter{equation}%
7269 \protected@edef\theHparentequation{\theHequation}%
7270 \addtocounter{equation}{-1}%
7271 }
7272
7273 \AddToHook{cmd/subequations/after}
7274 {%
7275 \def\theHequation{\theHparentequation\alph{equation}}%
7276 \ignorespaces
7277 }

```

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

```

7278 \newcommand\Hy@theorem@refstepcounter[1]
7279 {%
7280 \H@refstepcounter{#1}%
7281 \hyper@makecurrent{#1}%
7282 \global\let\Hy@dth@currentHref\@currentHref
7283 \AddToHookNext{para/begin}
7284 {\let\Hy@tempa\@currentHref
7285 \MakeLinkTarget*\Hy@dth@currentHref}%

```

```

7286   \global\let\@currentHref\Hy@tempa
7287   }%
7288 }
7289 \@ifundefined{hyper@nopatch@thm}{%
7290 \AtBeginDocument{%
7291   \@ifpackageloaded{cleveref}
7292   {\AddToHook{cmd/@thm/before}{\ifhmode\unskip\fi}}
7293   {%
7294     \ifpatchable\@thm{\refstepcounter}
7295     {\patchcmd\@thm{\refstepcounter}{\Hy@theorem@refstepcounter}{}}
7296     {}%
7297   }}{}

```

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.

```

7298 \@ifundefined{hyper@nopatch@footnote}{%
7299 \ifHy@hyperfootnotes
7300   \newcounter{Hfootnote}%
7301   \let\H@@@footnotetext\@footnotetext
7302   \let\H@@@footnotemark\@footnotemark
7303   \def\@xfootnotenext[#1]{%
7304     \begingroup
7305       \csname c@\@mpfn\endcsname #1\relax
7306       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7307     \endgroup
7308     \ifx\@footnotetext\@mpfootnotetext
7309       \expandafter\H@@@mpfootnotetext
7310     \else
7311       \expandafter\H@@@footnotetext
7312     \fi
7313   }%
7314   \def\@xfootnotemark[#1]{%
7315     \begingroup
7316       \c@footnote #1\relax
7317       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7318     \endgroup
7319     \H@@@footnotemark
7320   }%
7321   \let\H@@@mpfootnotetext\@mpfootnotetext
7322   \long\def\@mpfootnotetext#1{%
7323     \H@@@mpfootnotetext{%
7324       \ifHy@nesting
7325         \expandafter\ltx@firstoftwo
7326       \else
7327         \expandafter\ltx@secondoftwo
7328       \fi

```

```

7329  {%
7330  \expandafter\hyper@@anchor\expandafter{%
7331  \Hy@footnote@currentHref
7332  }{\ignorespaces #1}%
7333  }{%
7334  \Hy@raisedlink{%
7335  \expandafter\hyper@@anchor\expandafter{%
7336  \Hy@footnote@currentHref
7337  }{\relax}%
7338  }\ignorespaces #1%
7339  }%
7340  }%
7341  }%
7342  \long\def\@footnotetext#1{%
7343  \H@@@footnotetext{%
7344  \ifHy@nesting
7345  \expandafter\ltx@firstoftwo
7346  \else
7347  \expandafter\ltx@secondoftwo
7348  \fi
7349  {%
7350  \expandafter\hyper@@anchor\expandafter{%
7351  \Hy@footnote@currentHref
7352  }{\ignorespaces #1}%
7353  }{%
7354  \Hy@raisedlink{%
7355  \expandafter\hyper@@anchor\expandafter{%
7356  \Hy@footnote@currentHref
7357  }{\relax}%
7358  }%
7359  \let\@currentHref\Hy@footnote@currentHref
7360  \let\@currentlabelname\@empty
7361  \ignorespaces #1%
7362  }%
7363  }%
7364  }%

```

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.

```

7365  \def\@footnotemark{%
7366  \leavevmode
7367  \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7368  \stepcounter{Hfootnote}%
7369  \global\let\Hy@saved@currentHref\@currentHref
7370  \hyper@makecurrent{Hfootnote}%
7371  \global\let\Hy@footnote@currentHref\@currentHref
7372  \global\let\@currentHref\Hy@saved@currentHref
7373  \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7374  \@makefnmark
7375  \hyper@linkend
7376  \ifhmode\spacefactor\@x@sf\fi

```

```

7377 \relax
7378 }%

```

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

```

7379 \@ifpackageloaded{tabularx}{%
7380 \let\HyOrg@TX@endtabularx\TX@endtabularx
7381 \def\Hy@tabularx@hook{%
7382 \let\@footnotetext\H@@footnotetext
7383 \let\@footnotemark\H@@footnotemark
7384 \let\@mpfootnotetext\H@@mpfootnotetext
7385 }%
7386 \begingroup
7387 \toks@\expandafter{\TX@endtabularx}%
7388 \xdef\Hy@gtemp{%
7389 \noexpand\Hy@tabularx@hook
7390 \the\toks@
7391 }%
7392 \endgroup
7393 \let\TX@endtabularx\Hy@gtemp
7394 }-}%

```

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

```

7395 \@ifpackageloaded{longtable}{%
7396 \CheckCommand{\LT@p@fnttext}[1]{%
7397 \edef\@tempa{%
7398 \the\LT@p@fnt
7399 \noexpand\footnotetext[\the\c@footnote]}%
7400 }%
7401 \global\LT@p@fnt\expandafter{\@tempa{#1}}%
7402 }%
7403 \long\def\LT@p@fnttext#1{%
7404 \edef\@tempa{%
7405 \the\LT@p@fnt
7406 \begingroup
7407 \noexpand\c@footnote=\the\c@footnote\relax
7408 \noexpand\protected\xdef\noexpand\@thefnmark{%
7409 \noexpand\thempfn
7410 }%
7411 \noexpand\Hy@LT@footnotetext{%
7412 \Hy@footnote@currentHref
7413 }%
7414 }%
7415 \global\LT@p@fnt\expandafter{%
7416 \@tempa{#1}}%
7417 \endgroup
7418 }%
7419 }%
7420 \long\def\Hy@LT@footnotetext#1#2{%
7421 \H@@footnotetext{%
7422 \iffHy@nesting
7423 \hyper@@anchor{#1}{#2}}%

```

```

7424 \else
7425 \Hy@raisedlink{%
7426 \hyper@@anchor{#1}{\relax}%
7427 }%
7428 \def\@currentHref{#1}%
7429 \let\@currentlabelname\@empty
7430 #2%
7431 \fi
7432 }%
7433 }%
7434 }{}%

```

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

```

7435 \@ifpackageloaded{fancyvrb}{%
7436 \def\V@@@footnotetext{%
7437 \insert\footins\bgroup
7438 \csname reset@font\endcsname
7439 \footnotesize
7440 \interlinepenalty\interfootnotelinepenalty
7441 \splittopskip\footnotesep
7442 \splitmaxdepth\dp\strutbox
7443 \floatingpenalty \@MM
7444 \hsize\columnwidth
7445 \@parboxrestore
7446 \def\@currentcounter{footnote}%
7447 \protected@edef\@currentlabel{\csname p@footnote\endcsname\@thefn-
mark}%
7448 \@makefn-text{}}%
7449 \rule{\z@}{\footnotesep}%
7450 \bgroup
7451 \aftergroup\V@@@footnotetext
7452 \Hy@raisedlink{%
7453 \expandafter\hyper@@anchor\expandafter{%
7454 \Hy@footnote@currentHref
7455 }{\relax}%
7456 }%
7457 \let\@currentHref\Hy@footnote@currentHref
7458 \let\@currentlabelname\@empty
7459 \ignorespaces
7460 }%
7461 }{}%

```

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

```

7462 \def\Hy@temp#1{%
7463 \begingroup
7464 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7465 \endgroup
7466 \@footnotemark
7467 }%
7468 \ifx\Hy@temp\footref
7469 \def\footref#1{%
7470 \begingroup
7471 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7472 \endgroup

```

```

7473 \H@@footnotemark
7474 }%
7475 \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.

```

7476 \let\HyOrg@maketitle\maketitle
7477 \def\maketitle{%
7478 \let\Hy@saved@footnotemark\@footnotemark
7479 \let\Hy@saved@footnotetext\@footnotetext
7480 \let\@footnotemark\H@@footnotemark
7481 \let\@footnotetext\H@@footnotetext
7482 \@ifnextchar[\Hy@maketitle@optarg{% ]
7483 \HyOrg@maketitle
7484 \Hy@maketitle@end
7485 }%
7486 }%
7487 \def\Hy@maketitle@optarg[#1]{%
7488 \HyOrg@maketitle[#1]}%
7489 \Hy@maketitle@end
7490 }%
7491 \def\Hy@maketitle@end{%
7492 \ifx\@footnotemark\H@@footnotemark
7493 \let\@footnotemark\Hy@saved@footnotemark
7494 \fi
7495 \ifx\@footnotetext\H@@footnotetext
7496 \let\@footnotetext\Hy@saved@footnotetext
7497 \fi
7498 }%

```

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

```

7499 \def\realfootnote{%
7500 \@ifnextchar[\@xfootnote%]
7501 {\stepcounter{\@mpfn}}%
7502 \protected@xdef\@thefnmark{\thempfn}%
7503 \H@@@footnotemark\H@@@footnotetext
7504 }%
7505 }%

7506 \fi
7507 }-{}
7508 \Hy@DisableOption{hyperfootnotes}

7509 \</packageEnd>
7510 (*check)
7511 \checklatex
7512 \checkcommand\def\@xfootnotenext[#1]{%
7513 \begingroup
7514 \csname c@\@mpfn\endcsname #1\relax
7515 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7516 \endgroup
7517 \@footnotetext
7518 }
7519 \checkcommand\def\@xfootnotemark[#1]{%

```



```

7520 \begingroup
7521   \c@footnote #1\relax
7522   \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7523 \endgroup
7524 \@footnotemark
7525 }
7526 \checkcommand\def\@footnotemark{%
7527   \leavevmode
7528   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7529   \@makefnmark
7530   \ifhmode\spacefactor\@x@sf\fi
7531   \relax
7532 }
7533 </check>
7534 <*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.

```

7535 \@ifundefined{hyper@nopatch@caption}{%
7536 \def\caption{%
7537   \ifx\@capttype\@undefined
7538     \@latex@error{\noexpand\caption outside float}\@ehd
7539     \expandafter\@gobble
7540   \else
7541     \H@refstepcounter\@capttype
7542     \let\Hy@tempa\@caption
7543     \@ifundefined{float@caption}{%
7544       }{%
7545       \expandafter\ifx\csname @float@c@\@capttype\endcsname
7546         \float@caption
7547       \let\Hy@tempa\Hy@float@caption
7548       \fi
7549     }%
7550     \expandafter\@firstofone
7551     \fi
7552     {\@dblarg{\Hy@tempa\@capttype}}}%
7553 }
7554 \long\def\@caption#1[#2]#3{%
7555   \expandafter\ifx\csname if@capstart\expandafter\endcsname
7556     \csname iftrue\endcsname
7557     \global\let\@currentHref\hc@currentHref
7558   \else
7559     \hyper@makecurrent{\@capttype}%
7560   \fi
7561   \@ifundefined{NR@getttitle}{%
7562     \def\@currentlabelname{#2}%
7563   }{%
7564     \NR@getttitle{#2}%
7565   }%
7566   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7567     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%

```

```

7568 }%
7569 \begingroup
7570 \@parboxrestore
7571 \if@minipage
7572   \@setminipage
7573 \fi
7574 \normalsize
7575 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7576   \csname iftrue\endcsname
7577   \global\@capstartfalse
7578   \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7579 \else
7580   \@makecaption{\csname fnum@#1\endcsname}{%
7581     \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7582   \ifHy@nesting
7583     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7584   \else
7585     \Hy@raisedlink{%
7586       \expandafter\hyper@@anchor\expandafter{%
7587         \@currentHref
7588       }\relax}%
7589   }%
7590   #3%
7591 \fi
7592 }%
7593 \fi
7594 \par
7595 \endgroup
7596 }}{}}%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’.

```

7597 \let\Hy@float@caption\@caption
7598 \newcommand{\HyNew@float@makebox}[1]{%
7599   \HyOrg@float@makebox{%
7600     #1\relax
7601     \ifx\Hy@float@currentHref\@undefined
7602     \else
7603       \expandafter\hyper@@anchor\expandafter{%
7604         \Hy@float@currentHref
7605       }\relax}%
7606     \global\let\Hy@float@currentHref\@undefined
7607   \fi
7608 }%
7609 }%
7610 \@ifpackageloaded{float}{%
7611   \def\Hy@float@caption{%
7612     \ifx\Hy@float@currentHref\@undefined
7613       \hyper@makecurrent{\@capttype}%
7614     \global\let\Hy@float@currentHref\@currentHref

```

```

7615 \else
7616 \let\@currentHref\Hy@float@currentHref
7617 \fi
7618 \float@caption
7619 }%
7620 \let\HyOrg@float@makebox\float@makebox
7621 \let\float@makebox\HyNew@float@makebox
7622 }{}

7623 </packageEnd>
7624 <*check>
7625 \checklatex[1999/06/01 - 2000/06/01]
7626 \checkcommand\def\caption{%
7627 \ifx\@capttype\@undefined
7628 \@latex@error{\noexpand\caption outside float}\@ehd
7629 \expandafter\@gobble
7630 \else
7631 \refstepcounter\@capttype
7632 \expandafter\@firstofone
7633 \fi
7634 {\@dblarg{\@caption\@capttype}}%
7635 }
7636 \checkcommand\long\def\@caption#1[#2]#3{%
7637 \par
7638 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7639 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
7640 }%
7641 \begingroup
7642 \@parboxrestore
7643 \if@minipage
7644 \@setminipage
7645 \fi
7646 \normalsize
7647 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7648 \endgroup
7649 }
7650 </check>
7651 <*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.

```

7652 \def\hyper@natlinkstart#1{%
7653 \Hy@backout{#1}%
7654 \hyper@linkstart{cite}{cite.#1}%
7655 \def\hyper@nat@current{#1}%

```

```

7656 }
7657 \def\hyper@natlinkend{%
7658   \hyper@linkend
7659 }
7660 \def\hyper@natlinkbreak#1#2{%
7661   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7662 }
7663 \def\hyper@natanchorstart#1{%
7664   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7665 }
7666 \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.

```

7667 \@ifundefined{hyper@nopatch@bib}
7668 {%
7669   \ltx@ifundefined{NAT@parse}{%
7670     \providecommand*\@extra@binfo{}%
7671     \providecommand*\@extra@b@citeb{}%
7672   \def\bibcite#1#2{%
7673     \@newlabel{b}{#1\@extra@binfo}{%
7674       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7675     }%
7676   }%
7677   \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.”.

```

7678   \let\Hy@bibcite\bibcite
7679   \begingroup
7680   \@ifundefined{bbl@cite@choice}{%
7681     \g@addto@macro\bbl@cite@choice{%
7682       \let\bibcite\Hy@bibcite
7683     }%
7684   }%
7685   \endgroup

```

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

```

7686   \providecommand*\@BIBLABEL{\@biblabel}%
7687   \def\@bibitem[#1]#2{%
7688     \@skiphyperreftrue
7689     \H@item[%
7690       \ifx\Hy@raisedlink\@empty
7691         \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7692         \@BIBLABEL{#1}%
7693       \hyper@anchorend
7694     \else
7695       \Hy@raisedlink{%
7696         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7697       }%
7698     \@BIBLABEL{#1}%
7699   \fi
7700   \hfill

```

```

7701   ]%
7702   \@skiphyperreffalse
7703   \if@filesw
7704     \begingroup
7705       \let\protect\noexpand
7706       \immediate\write\@auxout{%
7707         \string\bibcite{#2}{#1}%
7708       }%
7709     \endgroup
7710   \fi
7711   \ignorespaces
7712 }%

```

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

```

7713   \def\@bibitem#1{%
7714     \@skiphyperrefftrue\H@item\@skiphyperreffalse
7715     \Hy@raisedlink{%
7716       \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7717     }%
7718     \if@filesw
7719       \begingroup
7720         \let\protect\noexpand
7721         \immediate\write\@auxout{%
7722           \string\bibcite{#1}{\the\value{\@listctr}}%
7723         }%
7724       \endgroup
7725     \fi
7726     \ignorespaces
7727   }%
7728 }{}%
7729 }{}

7730 </packageEnd>
7731 (*check)
7732 \checklatex
7733 \checkcommand\def\@bibitem[#1]#2{%
7734   \item[\@biblabel{#1}\hfill]%
7735   \if@filesw
7736     {%
7737       \let\protect\noexpand
7738       \immediate\write\@auxout{%
7739         \string\bibcite{#2}{#1}%
7740       }%
7741     }%
7742   \fi
7743   \ignorespaces
7744 }
7745 \checkcommand\def\@bibitem#1{%
7746   \item
7747   \if@filesw
7748     \immediate\write\@auxout{%
7749       \string\bibcite{#1}{\the\value{\@listctr}}%
7750     }%
7751   \fi

```

```

7752 \ignorespaces
7753 }
7754 </check>
7755 <*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.

```

7756 \@ifpackageloaded{harvard}{%
7757 \Hy@AtBeginDocument{%
7758 \Hy@Info{*** compatibility with harvard **** }%
7759 \Hy@raiselinksfalse
7760 \def\harvardcite#1#2#3#4{%
7761 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{cite.#1}{#2}}%
7762 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{cite.#1}{#3}}%
7763 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{cite.#1}{#4}}%
7764 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
7765 }%
7766 \def\HAR@citetoaux#1{%
7767 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7768 \ifHy@backref
7769 \ifx\@empty\@currentlabel
7770 \else
7771 \@bsphack
7772 \if@filesw
7773 \protected@write\@auxout{}{%
7774 \string\@writefile{brf}{%
7775 \string\backcite{#1}{%
7776 {thepage}{\@currentlabel}{\@currentHref}%
7777 }%
7778 }%
7779 }%
7780 \fi
7781 \@esphack
7782 \fi
7783 \fi
7784 }%
7785 \def\harvarditem{%
7786 \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
7787 }%
7788 \def\@harvarditem[#1]#2#3#4#5\par{%
7789 \item[]%
7790 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7791 \if@filesw
7792 \begingroup
7793 \def\protect##1{\string ##1\space}%
7794 \ifthenelse{equal{#1}{\null}}%

```

```

7795     {\def\next{#4}{#2}{#2}{#3}}}%
7796     {\def\next{#4}{#2}{#1}{#3}}}%
7797     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7798   \endgroup
7799   \fi
7800   \protect\hspace*{-\labelwidth}%
7801   \protect\hspace*{-\labelsep}%
7802   \ignorespaces
7803   #5%
7804   \ifHy@backref
7805     \newblock
7806     \backref{\csname br@#4\endcsname}%
7807   \fi
7808   \par
7809 }%

```

`\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`:

```

7810   \long\def\HAR@checkcitations#1#2#3#4{%
7811     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
7812     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7813     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
7814     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7815     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
7816     \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7817     \else
7818       \@tempwatrue
7819     \fi
7820   \else
7821     \@tempwatrue
7822   \fi
7823   \else
7824     \@tempwatrue
7825   \fi
7826 }%
7827 }%

7828 }-{}

```

36.2 Package chicago

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

```

7829 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

7830   \def\citeN{%
7831     \def\@citeseppen{-1000}%
7832     \def\@cite##1##2{##1}%
7833     \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7834     \@citedata@opt
7835   }%

```

`\shortciteN`

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

`\@citedata@opt`

```
7842 \def\@citedata@opt{%
7843   \let\@cite@opt\@empty
7844   \@ifnextchar [{%
7845     \@tempswatrue
7846     \@citedatax@opt
7847   }{%
7848     \@tempswafalse
7849     \@citedatax[]%
7850   }%
7851 }%
```

`\@citedatax@opt`

```
7852 \def\@citedatax@opt[#1]{%
7853   \def\@cite@opt{, #1}%
7854   \@citedatax[{#1}]%
7855 }%

7856 }{}
```

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.

This where we supply a destination for each page.

```
7857 \ltx@ifclassloaded{slides}{%
7858   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
7859   \def\Hy@PageAnchorSlidesPlain{%
7860     \advance\c@page\ltx@one
7861     \edef\Hy@TempPageAnchor{%
7862       \noexpand\hyper@@anchor{%
7863         page.\the\c@slide.\the\c@overlay.\the\c@note%
7864         \ifnum\c@page=\ltx@one
7865           \else
7866             .\the\c@page
7867           \fi
7868         }%
7869     }%
7870     \advance\c@page-\ltx@one
7871   }%
7872   \def\Hy@PageAnchorSlide{%
```



```

7873 \advance\c@page\ltx@one
7874 \ifnum\c@page>\ltx@one
7875 \ltx@ifundefined{theHpage}{%
7876 \protected@edef\Hy@TheSlideOptionalPage{%
7877 \Hy@SlidesFormatOptionalPage{\thepage}%
7878 }%
7879 }{%
7880 \protected@edef\Hy@TheSlideOptionalPage{%
7881 \Hy@SlidesFormatOptionalPage{\theHpage}%
7882 }%
7883 }%
7884 \else
7885 \def\Hy@TheSlideOptionalPage{}%
7886 \fi
7887 \advance\c@page-\ltx@one
7888 \pdfstringdef\@the@H@page{%
7889 \csname
7890 the%
7891 \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
7892 \Hy@SlidesPage
7893 \endcsname
7894 \Hy@TheSlideOptionalPage
7895 }%
7896 \ltx@gobblethree
7897 }%
7898 \def\Hy@SlidesPage{slide}%
7899 \g@addto@macro\slide{%
7900 \def\Hy@SlidesPage{slide}%
7901 }%
7902 \g@addto@macro\overlay{%
7903 \def\Hy@SlidesPage{overlay}%
7904 }%
7905 \g@addto@macro\note{%
7906 \def\Hy@SlidesPage{note}%
7907 }%
7908 }{%
7909 \def\Hy@PageAnchorSlidesPlain{}%
7910 \def\Hy@PageAnchorSlide{}%
7911 }
7912 \def\Hy@EveryPageAnchor{%
7913 \Hy@DistillerDestFix
7914 \ifHy@pageanchor
7915 \ifHy@hypertexnames
7916 \ifHy@plainpages
7917 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7918 \Hy@PageAnchorSlidesPlain
7919 \else
7920 \begingroup
7921 \let\@number\@firstofone
7922 \Hy@unicodefalse
7923 \Hy@PageAnchorSlide
7924 \pdfstringdef\@the@H@page{\thepage}%
7925 \endgroup
7926 \EdefUnescapeString\@the@H@page{\@the@H@page}%

```

```

7927     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7928     \fi
7929 \else
7930   \Hy@GlobalStepCount\Hy@pagecounter
7931   \def\Hy@TempPageAnchor{%
7932     \hyper@@anchor{page.\the\Hy@pagecounter}%
7933   }%
7934   \fi
7935   \vbox to 0pt{%
7936     \kern\voffset
7937     \kern\topmargin
7938     \kern-1bp\relax
7939     \hbox to 0pt{%
7940       \kern\hoffset
7941       \kern\ifodd\value{page}%
7942         \oddsidemargin
7943       \else
7944         \evensidemargin
7945       \fi
7946       \kern-1bp\relax
7947       \Hy@TempPageAnchor\relax
7948     \hss
7949   }%
7950   \vss
7951 }%
7952 \fi
7953 }
7954 \g@addto@macro\Hy@EveryPageBoxHook{%
7955   \Hy@EveryPageAnchor
7956 }

```

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 tocf file.

```

7957 \providecommand\protected@file@percent{}
7958 \@ifundefined{hyper@nopatch@toc}{%
7959   \def\addcontentsline#1#2#3{% toc extension, type, tag
7960     \begingroup
7961       \let\label\@gobble
7962       \ifx\@currentHref\@empty
7963         \Hy@Warning{%
7964           No destination for bookmark of \string\addcontentsline,%
7965           \MessageBreak destination is added%
7966         }%
7967       \phantomsection
7968     \fi
7969     \expandafter\ifx\csname toplevel@#2\endcsname\relax
7970       \begingroup

```

```

7971 \def\Hy@tempa{#1}%
7972 \ifx\Hy@tempa\Hy@bookmarkstype
7973 \Hy@WarningNoLine{%
7974     bookmark level for unknown #2 defaults to 0%
7975 }%
7976 \else
7977 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7978 \fi
7979 \endgroup
7980 \expandafter\gdef\csname tolevel@#2\endcsname{0}%
7981 \fi
7982 \edef\Hy@toclevel{\csname tolevel@#2\endcsname}%
7983 \Hy@writebookmark{\csname the#2\endcsname}%
7984 {#3}%
7985 {\@currentHref}%
7986 {\Hy@toclevel}%
7987 {#1}%
7988 \ifHy@verbose
7989 \begingroup
7990 \def\Hy@tempa{#3}%
7991 \@onelevel@sanitize\Hy@tempa
7992 \let\temp@online\on@line
7993 \let\on@line\@empty
7994 \Hy@Info{%
7995     bookmark\temp@online:\MessageBreak
7996     thecounter {\csname the#2\endcsname}\MessageBreak
7997     text {\Hy@tempa}\MessageBreak
7998     reference {\@currentHref}\MessageBreak
7999     tolevel {\Hy@toclevel}\MessageBreak
8000     type {#1}%
8001 }%
8002 \endgroup
8003 \fi
8004 \addtocontents{#1}{%
8005 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8006 }%
8007 \endgroup
8008 }
8009 }{}

```

`\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:

```

8010 \protected\def\Hy@toclinkstart{\hyper@linkstart{link}{\Hy@tocdestname}}
8011 \protected\def\Hy@toclinkend{\hyper@linkend}
8012
8013 \@ifundefined{hyper@nopatch@toc}{%
8014 \def\contentsline#1#2#3#4{%
8015 \begingroup
8016 \Hy@safe@activestrue
8017 \edef\x{\endgroup
8018 \def\noexpand\Hy@tocdestname{#4}%

```

```

8019 } \x
8020 \ifx\Hy@tocdestname\ltx@empty
8021   \csname l@#1\endcsname{#2}{#3}%
8022 \else
8023   \ifcase\Hy@linktoc % none
8024     \csname l@#1\endcsname{#2}{#3}%
8025   \or % section
8026     \csname l@#1\endcsname{%
8027       \Hy@toclinkstart{#2}\Hy@toclinkend
8028     }{#3}%
8029   \or % page
8030     \def\Hy@temp{#3}%
8031     \ifx\Hy@temp\ltx@empty
8032       \csname l@#1\endcsname{#2}{#3}%
8033     \else
8034       \csname l@#1\endcsname{#2}{#3}{%
8035         \Hy@toclinkstart{#3}\Hy@toclinkend
8036       }%
8037     \fi
8038   \else % all
8039     \def\Hy@temp{#3}%
8040     \ifx\Hy@temp\ltx@empty
8041       \csname l@#1\endcsname{%
8042         \Hy@toclinkstart{#2}\Hy@toclinkend
8043       }{#3}%
8044     \else
8045       \csname l@#1\endcsname{%
8046         \Hy@toclinkstart{#2}\Hy@toclinkend
8047       }{#3}%
8048       \Hy@toclinkstart{#3}\Hy@toclinkend
8049     }%
8050     \fi
8051   \fi
8052 \fi
8053 }
8054 }{}

8055 \endpackage
8056 \check
8057 \checklatex
8058 \checkcommand\def\addcontentsline#1#2#3{%
8059   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8060 }
8061 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8062 \endcheck
8063 \endpackage

```

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.

```

8064 \@ifundefined{hyper@nopatch@counter}
8065 {

```

```

8066 \let\H@definecounter\@definecounter
8067 \def\@definecounter#1{%
8068   \H@definecounter{#1}%
8069   \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8070 }
8071 }{}

```

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.

```

8072 \ifundefined{hyper@nopatch@counter}
8073 {
8074   \let\H@newctr\@newctr
8075   \def\@newctr#1[#2]{%
8076     \H@newctr#1[#2]}%
8077   \expandafter\gdef\csname theH#1\endcsname{%
8078     \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
8079   }%
8080 }
8081 }{}

```

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.

```

8082 \ifundefined{hyper@nopatch@amsmath@tag}
8083 {%
8084   \AddToHook{package/amsmath/after}{%
8085     \def\Hy@make@anchor{%
8086       \Hy@MakeCurrentHrefAuto{AMS}%
8087       \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8088     }%
8089     \def\Hy@make@df@tag@@#1{%
8090       \gdef\df@tag{%
8091         \maketag@@@{\Hy@make@anchor#1}%
8092         \def\@currentlabel{#1}%
8093       }%
8094     }%
8095     \def\Hy@make@df@tag@@@#1{%
8096       \gdef\df@tag{%
8097         \tagform@{\Hy@make@anchor#1}%
8098         \toks@\@xp{\p@equation{#1}}%
8099         \edef\@currentlabel{\the\toks@}%
8100       }%
8101     }%
8102     \let\HyOrg@make@df@tag@@\make@df@tag@@

```

```

8103 \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
8104 \let\make@df@tag@@\Hy@make@df@tag@@
8105 \let\make@df@tag@@@\Hy@make@df@tag@@@
8106 }{}
8107 }{}

```

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.

```

8108 \@ifundefined{hyper@nopatch@counter}
8109 {
8110 \let\HyOrg@addtoreset\@addtoreset
8111 \def\@addtoreset#1#2{%
8112 \HyOrg@addtoreset{#1}{#2}%
8113 \expandafter\xdef\csname theH#1\endcsname{%
8114 \expandafter\noexpand
8115 \csname the\@ifundefined{theH#2}{H#2\endcsname
8116 .\noexpand\the\noexpand\value{#1}%
8117 }%
8118 }
8119 }{}

```

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

```

8120 </packageEnd>
8121 < *check>
8122 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8123 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8124 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8125 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8126 \@addtoreset{#2}{#3}%
8127 \@xp\xdef\csname the#2\endcsname{%
8128 \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8129 }%
8130 }%
8131 }%
8132 }%
8133 </check>

```

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

```

8134 < *packageEnd>

```

```

8135 \@ifundefined{hyper@nopatch@counter}
8136 {
8137   \AddToHook{package/amsmath/after}{%
8138     \renewcommand*\numberwithin{3}[\arabic]{%
8139       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8140         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8141           \HyOrg@addtoreset{#2}{#3}%
8142           \@xp\xdef\csname the#2\endcsname{%
8143             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8144           }%
8145           \@xp\xdef\csname theH#2\endcsname{%
8146             \@xp\@nx
8147             \csname the\@ifundefined{theH#3}{H#3\endcsname
8148             .\@nx#1{#2}%
8149           }%
8150         }%
8151       }%
8152     }%
8153   }{}
8154 }{}

```

41 Included figures

Simply intercept the low level graphics package macro.

```

8155 \ifHy@hyperfigures
8156   \let\Hy@Gin@setfile\Gin@setfile
8157   \def\Gin@setfile#1#2#3{%
8158     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8159   }%
8160 \fi
8161 \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.

```

8162 \ifHy@hyperindex
8163   \def\HyInd@ParenLeft{()}%
8164   \def\HyInd@ParenRight{)}%
8165   \def\hyperindexformat#1#2{%
8166     \let\HyOrg@hyperpage\hyperpage
8167     \let\hyperpage\@firstofone
8168     #1{\HyOrg@hyperpage{#2}}%
8169     \let\hyperpage\HyOrg@hyperpage

```

```

8170 }%
8171 \Hy@nextfalse
8172 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8173 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8174 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8175 \begingroup
8176 \lccode`|= \expandafter` \HyInd@EncapChar\relax
8177 \lccode`/= ` \relax
8178 \lowercase{\endgroup
8179 \ifHy@next
8180 \let\HyInd@org@wrindex\@wrindex
8181 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
8182 \def\HyInd@wrindex#1#2|#3|#4\{\%
8183 \ifx\|#3\%
8184 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8185 \else
8186 \HyInd@@@wrindex{#1}{#2}#3\%
8187 \fi
8188 }%
8189 \def\HyInd@@@wrindex#1#2#3#4\{\%
8190 \def\Hy@temp@A{#3}%
8191 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8192 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8193 \relax
8194 \HyInd@org@wrindex{#1}{%
8195 #2|hyperindexformat{/#3#4}%
8196 }%
8197 \else
8198 \ifx\|#4\%
8199 \ifx\Hy@temp@A\HyInd@ParenRight
8200 \HyInd@org@wrindex{#1}{#2|#3}%
8201 \else
8202 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8203 \fi
8204 \else
8205 \HyInd@org@wrindex{#1}{%
8206 #2|#3hyperindexformat{/#4}%
8207 }%
8208 \fi
8209 \fi
8210 }%
8211 \else
8212 \def\@wrindex#1{\@wrindex#1||\}%
8213 \def\@wrindex#1|#2|#3\{\%
8214 \if@filesw
8215 \ifx\|#2\%
8216 \protected@write\@indexfile{}{%
8217 \string\indexentry{#1|hyperpage}{\thepage}%
8218 }%
8219 \else
8220 \HyInd@@@wrindex{#1}#2\%
8221 \fi
8222 \fi
8223 \endgroup

```



```

8224     \@esphack
8225 }%
8226 \def\HyInd@@@wrindex#1#2#3\{\%
8227 \def\Hy@temp@A{#2}%
8228 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8229     \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8230     \relax
8231 \protected@write\@indexfile{\%
8232 \string\indexentry{\%
8233 #1|hyperindexformat{/#2#3}%
8234 }\the page}%
8235 }%
8236 \else
8237 \ifx\#3\%
8238 \ifx\Hy@temp@A\HyInd@ParenRight
8239 \HyInd@DefKey{#1}%
8240 \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8241 \let\Hy@temp\ltx@empty
8242 }{\%
8243 \expandafter\let\expandafter\Hy@temp
8244 \csname HyInd@(\HyInd@key)\endcsname
8245 }%
8246 \protected@write\@indexfile{\%
8247 \string\indexentry{#1|#2\Hy@temp}\the page}%
8248 }%
8249 \else
8250 \protected@write\@indexfile{\%
8251 \string\indexentry{#1|#2hyperpage}\the page}%
8252 }%
8253 \HyInd@DefKey{#1}%
8254 \expandafter
8255 \gdef\csname HyInd@(\HyInd@key)\endcsname{\%
8256 hyperpage%
8257 }%
8258 \fi
8259 \else
8260 \protected@write\@indexfile{\%
8261 \string\indexentry{\%
8262 #1|#2hyperindexformat{/#3}%
8263 }\the page}%
8264 }%
8265 \ifx\Hy@temp@A\HyInd@ParenLeft
8266 \HyInd@DefKey{#1}%
8267 \expandafter
8268 \gdef\csname HyInd@(\HyInd@key)\endcsname{\%
8269 hyperindexformat{/#3}%
8270 }%
8271 \fi
8272 \fi
8273 \fi
8274 }%
8275 \def\HyInd@DefKey#1{\%
8276 \begingroup
8277 \let\protect\@unexpandable@protect

```

```

8278     \edef\Hy@temp{#1}%
8279     \ltx@onelevel@sanitize\Hy@temp
8280     \global\let\HyInd@key\Hy@temp
8281     \endgroup
8282   }%
8283   \fi
8284 }%
8285 \fi
8286 \Hy@DisableOption{hyperindex}
8287 \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.

```
8288 \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.

```

8289 \def\hyperpage#1{%
8290   \HyInd@hyperpage#1\nohyperpage{}\@nil
8291 }
8292 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8293   \HyInd@@hyperpage{#1}%
8294   #2%
8295   \def\Hy@temp{#3}%
8296   \ifx\Hy@temp\@empty
8297     \else
8298     \ltx@ReturnAfterFi{%
8299       \HyInd@hyperpage#3\@nil
8300     }%
8301   \fi
8302 }
8303 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8304 \def\@hyperpage#1--#2--#3\{\%
8305   \ifx\#2\%
8306     \@commahyperpage{#1}%
8307   \else
8308     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8309   \fi
8310 }
8311 \def\@commahyperpage#1{\@commahyperpage#1, \}
8312 \def\@commahyperpage#1, #2,#3\{\%
8313   \ifx\#2\%
8314     \HyInd@pagelink{#1}%
8315   \else
8316     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8317   \fi
8318 }

```

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

```

8319 \def\HyInd@pagelink#1{%
8320   \begingroup
8321   \toks@={}%
8322   \HyInd@removespaces#1 \@nil

```

```

8323 \endgroup
8324 }
8325 \def\HyInd@removespaces#1 #2\@nil{%
8326 \toks@=\expandafter{\the\toks@#1}%
8327 \ifx\#2\%
8328 \edef\x{\the\toks@}%
8329 \ifx\x\@empty
8330 \else
8331 \hyperlink{page.\the\toks@}{\the\toks@}%
8332 \fi
8333 \else
8334 \ltx@ReturnAfterFi{%
8335 \HyInd@removespaces#2\@nil
8336 }%
8337 \fi
8338 }

```

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.

```

8339 \ifHy@texht
8340 \expandafter\endinput
8341 \fi
8342 \let\real@setref\@setref
8343 \def\@setref#1#2#3{% csname, extract group, refname
8344 \ifx#1\relax
8345 \protect\G@refundefinedtrue
8346 \nfss@text{\reset@font\bfseries ??}%
8347 \@latex@warning{%
8348 Reference `#3' on page \thepage \space undefined%
8349 }%
8350 \else
8351 \expandafter\Hy@setref@link#1\@empty\@empty\@empty\@nil{#2}%
8352 \fi
8353 }

```

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

```

8354 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8355 \begingroup
8356 \toks0={\hyper@link{#5}{#4}}%
8357 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8358 \edef\x{\endgroup
8359 \the\toks0 {\the\toks1 }%
8360 }%
8361 \x
8362 }
8363 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8364 \ifx#1\relax
8365 \protect\G@refundefinedtrue
8366 \nfss@text{\reset@font\bfseries ??}%
8367 \@latex@warning{%
8368 Reference `#3' on page \thepage \space undefined%
8369 }%

```

```

8370 \else
8371 \protect\hyper@@@link
8372 {\expandafter\@fifthoffive#1}%
8373 {page.\expandafter\@secondoffive#1}%
8374 {\expandafter\@secondoffive#1}%
8375 \fi
8376 }

8377 </packageEnd>
8378 <*check>
8379 \checklatex
8380 \checkcommand\def\@setref#1#2#3{%
8381 \ifx#1\relax
8382 \protect\G@refundefinedtrue
8383 \nfss@text{\reset@font\bfseries ??}%
8384 \@latex@warning{%
8385 Reference `#3' on page \thepage\space undefined%
8386 }%
8387 \else
8388 \expandafter#2#1\null
8389 \fi
8390 }
8391 </check>
8392 <*packageEnd>

```

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

```

8393 \def\HyRef@StarSetRef#1{%
8394 \begingroup
8395 \Hy@safe@activestru
8396 \let\protect\@unexpandable@protect
8397 \edef\x{#1}%
8398 \@onelevel@sanitize\x
8399 \edef\x{\endgroup
8400 \noexpand\HyRef@@StarSetRef
8401 \expandafter\noexpand\cname r@\x\endcname{\x}%
8402 }%
8403 \x
8404 }
8405 \def\HyRef@@StarSetRef#1#2#3{%
8406 \ifx#1\@undefined
8407 \let#1\relax
8408 \fi
8409 \real@setref#1#3{#2}%
8410 }
8411 \def\@refstar#1{%
8412 \HyRef@StarSetRef{#1}\@firstoffive
8413 }
8414 \def\@pagerefstar#1{%
8415 \HyRef@StarSetRef{#1}\@secondoffive
8416 }
8417 \def\@namerefstar#1{%
8418 \HyRef@StarSetRef{#1}\@thirdoffive
8419 }
8420 \def\@Refstar#1{%

```

```

8421 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8422 }%
8423 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8424 \MakeUppercase#1%
8425 }%
8426 \def\HyRef@Ref#1{%
8427 \hyperref[#{1}]{\Ref*{#1}}%
8428 }%
8429 \Hy@AtBeginDocument{%
8430 \@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.

```

8431 \@ifundefined{hyper@nopatch@varioref}
8432 {
8433 \renewcommand\Vref@star[2][]{%
8434 \begingroup
8435 \let\T@pageref\@pagerefstar
8436 \Ref*{#2}
8437 \vpageref[#{1}]{#2}%
8438 \endgroup
8439 }%
8440 \renewcommand\Vr@f[2][]{%
8441 \begingroup
8442 \let\T@pageref\@pagerefstar
8443 \hyperref[#{2}]{%
8444 \Ref*{#2}
8445 \vpageref[#{1}]{#2}%
8446 }%
8447 \endgroup
8448 }%
8449 \renewcommand\vr@f[2][]{%
8450 \begingroup
8451 \let\T@pageref\@pagerefstar
8452 \hyperref[#{2}]{%
8453 \ref*{#2}
8454 \vpageref[#{1}]{#2}%
8455 }%
8456 \endgroup
8457 }%
8458 \renewcommand\vref@star[2][]{%
8459 \begingroup
8460 \let\T@pageref\@pagerefstar
8461 \ref*{#2}
8462 \vpageref[#{1}]{#2}%
8463 \endgroup
8464 }%
8465 }{}%
8466 }{}%
8467 }

8468 \DeclareRobustCommand*\autopageref}{%
8469 \@ifstar{%
8470 \HyRef@autopagerefname\pageref*%

```

```

8471 } \HyRef@autopageref
8472 }
8473 \def \HyRef@autopageref#1{%
8474 \hyperref[#{1}]{\HyRef@autopagerefname\pageref*{#{1}}}%
8475 }
8476 \def \HyRef@autopagerefname{%
8477 \ltx@ifundefined{pageautorefname}{%
8478 \ltx@ifundefined{pagename}{%
8479 \Hy@Warning{No autoref name for `page'}%
8480 }{%
8481 \pagename\nobreakspace
8482 }%
8483 }{%
8484 \pageautorefname\nobreakspace
8485 }%
8486 }

```

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

```

8487 \NewDocumentCommand\autoref{s}
8488 { \leavevmode
8489 \IfBooleanTF{#{1}}{\HyRef@autoref@gobbletwo}{\HyRef@autoref@hyper@@link}}
8490 \def \HyRef@autoref#1#2#3{%
8491 \begingroup
8492 \Hy@safe@activestrue
8493 \expandafter \HyRef@autosetref\csname r@#2\endcsname{#{2}}{#{1}}%
8494 \endgroup
8495 }
8496 \def \HyRef@autosetref#1#2#3#4{% link command, csname, refname
8497 \HyRef@ShowKeysRef{#{2}}%
8498 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8499 \edef \HyRef@thisref{%
8500 \expandafter \@fourthoffive#1 \@empty \@empty \@empty
8501 }%
8502 \expandafter \HyRef@testreftype \HyRef@thisref. \ \ %
8503 \Hy@safe@activesfalse
8504 #3{%
8505 \expandafter \@fifthoffive#1 \@empty \@empty \@empty
8506 }{%
8507 \expandafter \@fourthoffive#1 \@empty \@empty \@empty
8508 }{%
8509 \HyRef@currentHtag
8510 \expandafter \@firstoffive#1 \@empty \@empty \@empty
8511 \null
8512 }%
8513 \else
8514 \protect \G@refundefinedtrue
8515 \nfss@text{\reset@font\bfseries ??}%
8516 \@latex@warning{%
8517 Reference `#2' on page \thepage\space undefined%
8518 }%
8519 \fi
8520 }
8521 \def \HyRef@testreftype#1.#2\ \ {%

```

```

8522 \ltx@ifundefined{#1autorefname}{%
8523 \ltx@ifundefined{#1name}{%
8524 \HyRef@StripStar#1\*\@nil{#1}%
8525 \ltx@ifundefined{\HyRef@name autorefname}{%
8526 \ltx@ifundefined{\HyRef@name name}{%
8527 \def\HyRef@currentHtag{}%
8528 \Hy@Warning{No autoref name for `#1'}%
8529 }%
8530 \edef\HyRef@currentHtag{%
8531 \expandafter\noexpand\csname\HyRef@name name\endcsname
8532 \noexpand~%
8533 }%
8534 }%
8535 }%
8536 \edef\HyRef@currentHtag{%
8537 \expandafter\noexpand
8538 \csname\HyRef@name autorefname\endcsname
8539 \noexpand~%
8540 }%
8541 }%
8542 }%
8543 \edef\HyRef@currentHtag{%
8544 \expandafter\noexpand\csname#1name\endcsname
8545 \noexpand~%
8546 }%
8547 }%
8548 }%
8549 \edef\HyRef@currentHtag{%
8550 \expandafter\noexpand\csname#1autorefname\endcsname
8551 \noexpand~%
8552 }%
8553 }%
8554 }
8555 \def\HyRef@StripStar#1*\@nil#3{%
8556 \def\HyRef@name{#2}%
8557 \ifx\HyRef@name\HyRef@CaseStar
8558 \def\HyRef@name{#1}%
8559 \else
8560 \def\HyRef@name{#3}%
8561 \fi
8562 }
8563 \def\HyRef@CaseStar{*}
8564 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

8565 \let\HyRef@ShowKeysRef@gobble
8566 \def\HyRef@ShowKeysInit{%
8567 \ifcsname SK@@label\endcsname
8568 \ifx\SK@ref@empty
8569 \else
8570 \def\HyRef@ShowKeysRef{%
8571 \SK@\SK@@ref
8572 }%

```

```

8573 \fi
8574 \fi
8575 }
8576 \AddToHook{package/showkeys/after}{\HyRef@ShowKeysInit}

```

Defaults for the names that \autoref uses.

```

8577 \providecommand* \AMSautorefname{\equationautorefname}
8578 \providecommand* \Hfootnoteautorefname{\footnoteautorefname}
8579 \providecommand* \Itemautorefname{\itemautorefname}
8580 \providecommand* \itemautorefname{item}
8581 \providecommand* \equationautorefname{Equation}
8582 \providecommand* \footnoteautorefname{footnote}
8583 \providecommand* \itemautorefname{item}
8584 \providecommand* \figureautorefname{Figure}
8585 \providecommand* \tableautorefname{Table}
8586 \providecommand* \partautorefname{Part}
8587 \providecommand* \appendixautorefname{Appendix}
8588 \providecommand* \chapterautorefname{chapter}
8589 \providecommand* \sectionautorefname{section}
8590 \providecommand* \subsectionautorefname{subsection}
8591 \providecommand* \subsubsectionautorefname{subsubsection}
8592 \providecommand* \paragraphautorefname{paragraph}
8593 \providecommand* \subparagraphautorefname{subparagraph}
8594 \providecommand* \FancyVerbLineautorefname{line}
8595 \providecommand* \theoremautorefname{Theorem}
8596 \providecommand* \pageautorefname{page}
8597 </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_TE_X offers `\pdfescapestring`.

```

8598 (*pdfTEX | dviPdfm | xetex | vtex | pdfmarkbase | dviwindo)
8599 \begingroup\expandafter\expandafter\expandafter\endgroup
8600 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8601 \begingroup
8602 \catcode`\|=0 %
8603 \@makeother\|%
8604 |\@firstofone{ |endgroup
8605 |def|Hy@pstringdef#1#2{%
8606 |begingroup
8607 |edef~{|string~}%
8608 |xdef|Hy@gtemp{#2}%
8609 |endgroup
8610 |let#1|Hy@gtemp

```



```

8611 |@onelevel@sanitize#1%
8612 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
8613 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8614 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8615 }%
8616 |def|Hy@ExchangeBackslash#1\#2|@nil{%
8617 #1%
8618 |ifx|\#2|\%
8619 |else
8620 \\\%
8621 |ltx@ReturnAfterFi{%
8622 |Hy@ExchangeBackslash#2|@nil
8623 }%
8624 |fi
8625 }%
8626 }%
8627 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8628 #1%
8629 \ifx\#2\%
8630 \else
8631 \@backslashchar(%
8632 \ltx@ReturnAfterFi{%
8633 \Hy@ExchangeLeftParenthesis#2\@nil
8634 }%
8635 \fi
8636 }%
8637 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8638 #1%
8639 \ifx\#2\%
8640 \else
8641 \@backslashchar)%
8642 \ltx@ReturnAfterFi{%
8643 \Hy@ExchangeRightParenthesis#2\@nil
8644 }%
8645 \fi
8646 }%
8647 \else
8648 \def\Hy@pstringdef#1#2{%
8649 \begingroup
8650 \edef~{\string~}%
8651 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8652 \endgroup
8653 \let#1\Hy@gtemp
8654 }%
8655 \fi
8656 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo

```

43.2 pdftex

```

8657 (*pdfTeX)
8658 \providecommand*\XR@ext}{pdf}
8659 \Hy@setbreaklinks{true}
8660 \def\HyPat@ObjRef{%
8661 [0-9]*[1-9][0-9]* 0 R%

```

8662 }

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

```
8663 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
8664 \def\Hy@pdfminorversion{\pdfminorversion}%
8665 \ifHy@ocgcolorlinks
8666 \ifnum\Hy@pdfmajorminor@version<105 %
8667 \kvsetkeys{Hyp}{pdfversion=1.5}%
8668 \fi
8669 \fi
8670 \ifHy@setpdfversion
8671 \ifnum\Hy@pdf@majorminor@version<105 %
8672 \ltx@ifundefined{pdfobjcompresslevel}{%
8673 }{%
8674 \ifHy@verbose
8675 \Hy@InfoNoLine{%
8676 PDF object streams are disabled, because they are%
8677 \MessageBreak
8678 not supported in requested PDF version %
8679 \Hy@pdf@majorversion.\Hy@pdf@minorversion
8680 }%
8681 \fi
8682 \pdfobjcompresslevel=\ltx@zero
8683 }%
8684 \fi
8685 \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
8686 \else
8687 \let\Hy@temp\ltx@empty
8688 \def\Hy@temp@A#1#2{%
8689 \ifnum#1>\ltx@zero
8690 \edef\Hy@temp{%
8691 \Hy@temp
8692 \space\space
8693 \the#1\space #2%
8694 \ifnum#1=\ltx@one\else s\fi
8695 \MessageBreak
8696 }%
8697 \fi
8698 }%
8699 \Hy@temp@A\pdflastobj{PDF object}%
8700 \Hy@temp@A\pdflastxform{form XObject}%
8701 \Hy@temp@A\pdflastximage{image XObject}%
8702 \Hy@temp@A\pdflastannot{annotation}%
8703 \ltx@ifundefined{pdflastlink}{%
8704 }{%
8705 \Hy@temp@A\pdflastlink{link}%
8706 }%
8707 \ifx\Hy@temp\ltx@empty
```

```

8708 \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
8709 \Hy@pdfminorversion=\Hy@pdf@minorversion\relax
8710 \else
8711 \let\Hy@temp@A\ltx@empty
8712 \ifnum\Hy@pdf@majorminor@version=104 %
8713 \IfFileExists{pdf14.sty}{%
8714 \def\Hy@temp@A{%
8715 \MessageBreak
8716 Or \string\RequirePackage{pdf14} can be used%
8717 \MessageBreak
8718 before \string\documentclass\space as shortcut%
8719 }%
8720 }{}%
8721 \fi
8722 \Hy@WarningNoLine{%
8723 The PDF version number could not be set,\MessageBreak
8724 because some PDF objects are already written:%
8725 \MessageBreak
8726 \Hy@temp
8727 The version should be set as early as possible:%
8728 \MessageBreak
8729 \space\space
8730 \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
8731 \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
8732 \string\relax
8733 \ifnum\Hy@pdf@majorminor@version<105 %
8734 \ltx@ifundefined{pdfobjcompresslevel}{%
8735 }{%
8736 \MessageBreak
8737 \space\space
8738 \string\pdfobjcompresslevel=0\string\relax
8739 }%
8740 \fi
8741 \Hy@temp@A
8742 }%
8743 \fi
8744 \fi
8745 \PackageInfo{hyperref}{%
8746 \expandafter\string\Hy@pdfmajorversion.%
8747 \expandafter\string\Hy@pdfminorversion
8748 :=\number\Hy@pdf@majorversion.\number\Hy@pdf@minorversion\space
8749 }%
8750 \fi
8751 \edef\Hy@pdf@majorversion{\number\Hy@pdfmajorversion}%
8752 \edef\Hy@pdf@minorversion{\number\Hy@pdfminorversion}%
8753 \Hy@DisableOption{pdfversion}%
8754 \ifHy@ocgcolorlinks
8755 \pdf@ifdraftmode{}{%
8756 \immediate\pdfobj{%
8757 <<%
8758 /Type/OCG%
8759 /Name(View)%
8760 /Usage<<%
8761 /Print<<%

```

```

8762         /PrintState/OFF%
8763     >>%
8764     /View<<%
8765         /ViewState/ON%
8766     >>%
8767 >>%
8768 >>%
8769 }%
8770 \edef\OBJ@OCG@view{\the\pdfastobj\space 0 R}%
8771 \immediate\pdfobj{%
8772 <<%
8773     /Type/OCG%
8774     /Name(Print)%
8775     /Usage<<%
8776         /Print<<%
8777             /PrintState/ON%
8778         >>%
8779         /View<<%
8780             /ViewState/OFF%
8781         >>%
8782     >>%
8783 >>%
8784 }%
8785 \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
8786 \immediate\pdfobj{%
8787 [%
8788     \OBJ@OCG@view\space\OBJ@OCG@print
8789 ]%
8790 }%
8791 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
8792 \pdfcatalog{%
8793     /OCProperties<<%
8794         /OCGs \OBJ@OCGs
8795     /D<<%
8796         /OFF[\OBJ@OCG@print]%
8797         /AS[%
8798             <<%
8799                 /Event/View%
8800                 /OCGs \OBJ@OCGs
8801                 /Category[/View]%
8802             >>%
8803             <<%
8804                 /Event/Print%
8805                 /OCGs \OBJ@OCGs
8806                 /Category[/Print]%
8807             >>%
8808             <<%
8809                 /Event/Export%
8810                 /OCGs \OBJ@OCGs
8811                 /Category[/Print]%
8812             >>%
8813         ]%
8814     >>%
8815 >>%

```

```

8816 }%
8817 \begingroup
8818 \edef\x{\endgroup
8819 \pdfpageresources{%
8820 \the\pdfpageresources
8821 /Properties<<%
8822 /OCView \OBJ@OCG@view
8823 /OCPrint \OBJ@OCG@print
8824 >>%
8825 }%
8826 }%
8827 \x
8828 }%
8829 \Hy@AtBeginDocument{%
8830 \def\Hy@colorlink#1{%
8831 \begingroup
8832 \ifHy@ocgcolorlinks
8833 \def\Hy@ocgcolor{#1}%
8834 \setbox0=\hbox\bgroup\color@begingroup
8835 \else
8836 \HyColor@UseColor#1%
8837 \fi
8838 }%
8839 \def\Hy@endcolorlink{%
8840 \ifHy@ocgcolorlinks
8841 \color@endgroup\egroup
8842 \mbox{%
8843 \pdfiternal page{/OC/OCPrint BDC}%
8844 \rlap{\copy0}%
8845 \pdfiternal page{EMC/OC/OCView BDC}%
8846 \begingroup
8847 \expandafter\HyColor@UseColor\Hy@ocgcolor
8848 \box0 %
8849 \endgroup
8850 \pdfiternal page{EMC}%
8851 }%
8852 \fi
8853 \endgroup
8854 }%
8855 }%
8856 \else
8857 \Hy@DisableOption{ocgcolorlinks}%
8858 \fi

```

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

```

8859 \def\setpdfinkmargin#1{%
8860 \begingroup
8861 \setlength{\dimen@}{#1}%
8862 \expandafter\endgroup
8863 \expandafter\pdfinkmargin\the\dimen@\relax
8864 }
8865 \pdfinkmargin1pt %

```

First set up the default linking

```

8866 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```
8867 \Hy@WrapperDef\new@pdfink#1{%
8868   \ifhmode
8869     \@savsf\spacefactor
8870   \fi
8871 \Hy@SaveLastskip
8872 \Hy@VerboseAnchor{#1}%
8873 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8874 \Hy@DestName\Hy@pstringDest\@pdfview
8875 \Hy@RestoreLastskip
8876 \ifhmode
8877   \spacefactor\@savsf
8878 \fi
8879 }
8880 \let\pdf@endanchor\@empty
```

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

```
8881 \def\Hy@DestName#1#2{%
8882   \pdfdest name{#1}#2\relax
8883 }
```

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.

```
8884 \providecommand*\@pdfborder{0 0 1}
8885 \providecommand*\@pdfborderstyle{}
8886 \def\Hy@undefinedname{UNDEFINED}
8887 \def\find@pdfink#1#2{%
8888   \leavevmode
8889   \protected@edef\Hy@testname{#2}%
8890   \ifx\Hy@testname\@empty
8891     \Hy@Warning{%
8892       Empty destination name,\MessageBreak
8893       using '\Hy@undefinedname'%
8894     }%
8895     \let\Hy@testname\Hy@undefinedname
8896   \else
8897     \Hy@pstringdef\Hy@testname{%
8898       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8899     }%
8900   \fi
8901 \Hy@StartlinkName{%
8902   \ifHy@pdfa /F 4\fi
8903   \Hy@setpdfborder
8904   \Hy@setpdfhighlight
8905   \ifx\CurrentBorderColor\relax
8906     \else
8907     /C[\CurrentBorderColor]%
8908   \fi
8909 } \Hy@testname
8910 \expandafter\Hy@colorlink\csname @#1color\endcsname
```

```

8911 }
8912 \def\Hy@StartlinkName#1#2{%
8913 \pdfstartlink attr{#1}goto name{#2}\relax
8914 }
8915 \def\close@pdfink{%
8916 \Hy@endcolorlink
8917 \Hy@VerboseLinkStop
8918 \pdfendlink
8919 }
8920 \def\hyper@anchor#1{%
8921 \new@pdfink{#1}\anchor@spot\pdf@endanchor
8922 }
8923 \def\hyper@anchorstart#1{%
8924 \new@pdfink{#1}%
8925 \Hy@activeanchortrue
8926 }
8927 \def\hyper@anchorend{%
8928 \pdf@endanchor
8929 \Hy@activeanchorfalse
8930 }
8931 \def\hyper@linkstart#1#2{%
8932 \Hy@VerboseLinkStart{#1}{#2}%
8933 \ltx@ifundefined{@#1bordercolor}{%
8934 \let\CurrentBorderColor\relax
8935 }{%
8936 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8937 }%
8938 \find@pdfink{#1}{#2}%
8939 }
8940 \def\hyper@linkend{\close@pdfink}
8941 \def\hyper@link#1#2#3{%
8942 \Hy@VerboseLinkStart{#1}{#2}%
8943 \ltx@ifundefined{@#1bordercolor}{%
8944 \let\CurrentBorderColor\relax
8945 }{%
8946 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8947 }%
8948 \find@pdfink{#1}{#2}#3\Hy@xspace@end
8949 \close@pdfink
8950 }
8951 \let\CurrentBorderColor\@linkbordercolor
8952 \def\hyper@linkurl#1#2{%
8953 \begingroup
8954 \Hy@pstringdef\Hy@pstringURI{#2}%
8955 \hyper@chars
8956 \leavevmode
8957 \pdfstartlink
8958 attr{%
8959 \Hy@setpdfborder
8960 \Hy@setpdfhighlight
8961 \ifx\@urlbordercolor\relax
8962 \else
8963 /C[\@urlbordercolor]%
8964 \fi

```

```

8965 }%
8966 user{%
8967 /Subtype/Link%
8968 \ifHy@pdfa /F 4\fi
8969 /A<<%
8970 /Type/Action%
8971 /S/URI%
8972 /URI(\Hy@pstringURI)%
8973 \ifHy@href@ismap
8974 /IsMap true%
8975 \fi
8976 \Hy@href@nextactionraw
8977 >>%
8978 }%
8979 \relax
8980 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
8981 \close@pdfink
8982 \endgroup
8983 }
8984 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8985 \begingroup
8986 \def\Hy@pstringF{#2}%
8987 \Hy@CleanupFile\Hy@pstringF
8988 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
8989 \Hy@pstringdef\Hy@pstringD{#3}%
8990 \Hy@MakeRemoteAction
8991 \leavevmode
8992 \pdfstartlink
8993 attr{%
8994 \Hy@setpdfborder
8995 \Hy@setpdfhighlight
8996 \ifx\@filebordercolor\relax
8997 \else
8998 /C[\@filebordercolor]%
8999 \fi
9000 }%
9001 user {%
9002 /Subtype/Link%
9003 \ifHy@pdfa /F 4\fi
9004 /A<<%
9005 /F(\Hy@pstringF)%
9006 /S/GoToR%
9007 \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}

```



```

9008     \ifx\#3\%
9009     /D[\Hy@href@page\@pdfremotestartview]%
9010     \else
9011     /D(\Hy@pstringD)%
9012     \fi
9013     \Hy@href@nextactionraw
9014     >>%
9015     }%
9016     \relax
9017     \Hy@colorlink\@filecolor#1\Hy@xspace@end
9018     \close@pdfink
9019     \endgroup
9020 }
9021 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9022     \begingroup
9023     \Hy@pstringdef\Hy@pstringF{#1}%
9024     \Hy@pstringdef\Hy@pstringP{#3}%
9025     \leavevmode
9026     \pdfstartlink
9027     attr{%
9028     \Hy@setpdfborder
9029     \Hy@setpdfhighlight
9030     \ifx\@runbordercolor\relax
9031     \else
9032     /C[\@runbordercolor]%
9033     \fi
9034     }%
9035     user {%
9036     /Subtype/Link%
9037     \ifHy@pdfa /F 4\fi
9038     /A<<%
9039     /F(\Hy@pstringF)%
9040     /S/Launch%
9041     \Hy@SetNewWindow
9042     \ifx\#3\%
9043     \else
9044     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9045     \fi
9046     \Hy@href@nextactionraw
9047     >>%
9048     }%
9049     \relax
9050     \Hy@colorlink\@runcolor#2\Hy@xspace@end
9051     \close@pdfink
9052     \endgroup
9053 }

```

\PDF@SetupDox

```

9054 \def\PDF@SetupDoc{%
9055     \ifx\@pdfpagescrop\@empty
9056     \else
9057     \edef\process@me{%
9058     \pdfpagesattr={%

```

```

9059     /CropBox[\@pdfpagescrop]%
9060     \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9061     \else
9062     ^^J\the\pdfpagesattr
9063     \fi
9064     }%
9065     }%
9066     \process@me
9067     \fi
9068     \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9069     \pdfcatalog{%
9070     /PageMode/\@pdfpagemode
9071     \ifx\@baseurl\@empty
9072     \else
9073     /URI<</Base(\Hy@pstringB)>>%
9074     \fi
9075     }%
9076     \ifx\@pdfstartpage\@empty
9077     \else
9078     \ifx\@pdfstartview\@empty
9079     \else
9080     openaction goto page\@pdfstartpage{\@pdfstartview}%
9081     \fi
9082     \fi
9083     \edef\Hy@temp{%
9084     \ifHy@pdftoolbar\else /HideToolbar true\fi
9085     \ifHy@pdfmenubar\else /HideMenubar true\fi
9086     \ifHy@pdfwindowui\else /HideWindowUI true\fi
9087     \ifHy@pdffitwindow /FitWindow true\fi
9088     \ifHy@pdfcenterwindow /CenterWindow true\fi
9089     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9090     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9091     \Hy@UseNameKey{Direction}\@pdfdirection
9092     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9093     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9094     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9095     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9096     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9097     \Hy@UseNameKey{Duplex}\@pdfduplex
9098     \ifx\@pdfpicktraybypdfsize\@empty
9099     \else
9100     /PickTrayByPDFSize \@pdfpicktraybypdfsize
9101     \fi
9102     \ifx\@pdfprintpagerange\@empty
9103     \else
9104     /PrintPageRange[\@pdfprintpagerange]%
9105     \fi
9106     \ifx\@pdfnumcopies\@empty
9107     \else
9108     /NumCopies \@pdfnumcopies
9109     \fi
9110     }%
9111     \pdfcatalog{%
9112     \ifx\Hy@temp\@empty

```

```

9113 \else
9114 /ViewerPreferences<<\Hy@temp>>%
9115 \fi
9116 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9117 \ifx\@pdflang\relax
9118 \else
9119 /Lang(\@pdflang)%
9120 \fi
9121 }%
9122 }

```

\PDF@FinishDoc

```

9123 \def\PDF@FinishDoc{%
9124 \pdf@ifdraftmode{ }{%
9125 \Hy@UseMaketitleInfos
9126 \HyInfo@GenerateAddons
9127 \pdfinfo{%
9128 /Author(\@pdfauthor)%
9129 /Title(\@pdftitle)%
9130 /Subject(\@pdfsubject)%
9131 /Creator(\@pdfcreator)%
9132 \ifx\@pdfcreationdate\@empty
9133 \else
9134 /CreationDate(\@pdfcreationdate)%
9135 \fi
9136 \ifx\@pdfmoddate\@empty
9137 \else
9138 /ModDate(\@pdfmoddate)%
9139 \fi
9140 \ifx\@pdfproducer\relax
9141 \else
9142 /Producer(\@pdfproducer)%
9143 \fi
9144 /Keywords(\@pdfkeywords)%
9145 \ifx\@pdftrapped\@empty
9146 \else
9147 /Trapped/\@pdftrapped
9148 \fi
9149 \HyInfo@Addons
9150 }%
9151 }%
9152 \Hy@DisableOption{pdfauthor}%
9153 \Hy@DisableOption{pdftitle}%
9154 \Hy@DisableOption{pdfsubject}%
9155 \Hy@DisableOption{pdfcreator}%
9156 \Hy@DisableOption{addtopdfcreator}%
9157 \Hy@DisableOption{pdfcreationdate}%
9158 \Hy@DisableOption{pdfmoddate}%
9159 \Hy@DisableOption{pdfproducer}%
9160 \Hy@DisableOption{pdfkeywords}%
9161 \Hy@DisableOption{pdftrapped}%
9162 \Hy@DisableOption{pdfinfo}%
9163 }

```

\hyper@pagetransition \@pdfpagetransition is initialized with \relax. So it indicates, if option pdfpage-

transition is used. First previous /Trans entries are removed. If a new /Trans key exists, it is appended to \pdfpageattr.

```

9164 \def\hyper@pagetransition{%
9165   \ifx\@pdfpagetransition\relax
9166   \else
9167     \expandafter\Hy@RemoveTransPageAttr
9168     \the\pdfpageattr^^J/Trans{}}>>\END
9169   \ifx\@pdfpagetransition\@empty
9170   \else
9171     \edef\@processme{%
9172       \global\pdfpageattr{%
9173         \the\pdfpageattr
9174         ^^J/Trans << /S /\@pdfpagetransition\space >>%
9175       }%
9176     }%
9177     \@processme
9178   \fi
9179 \fi
9180 }
```

`\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.

```

9181 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9182   \ifx\#2\%
9183     \global\pdfpageattr{#1}%
9184   \else
9185     \Hy@RemoveTransPageAttr#1#4\END
9186   \fi
9187 }
```

`\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`.

```

9188 \def\hyper@pageduration{%
9189   \ifx\@pdfpageduration\relax
9190   \else
9191     \expandafter
9192     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9193     \ifx\@pdfpageduration\@empty
9194     \else
9195       \edef\@processme{%
9196         \global\pdfpageattr{%
9197           \the\pdfpageattr
9198           ^^J/Dur \@pdfpageduration\space
9199         }%
9200       }%
9201       \@processme
9202     \fi
9203   \fi
9204 }
```

`\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.

```

9205 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9206   \ifx\#2\%
9207     \global\pdfpageattr{#1}%
9208   \else
9209     \Hy@RemoveDurPageAttr#1#4\END
9210   \fi
9211 }

9212 \pdf@ifdraftmode{}{%
9213   \g@addto@macro\Hy@EveryPageHook{%
9214     \hyper@pagetransition
9215     \hyper@pageduration
9216   }%
9217 }

```

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

```

9218 </pdftex>
9219 <*pdftex | xetex>
9220 \Hy@AtBeginDocument{%
9221   \ifHy@setpagesize
9222     \expandafter\@firstofone
9223   \else
9224     \expandafter\@gobble
9225   \fi
9226   {%
9227     \@ifclassloaded{seminar}{%
9228 <*pdftex>
9229       \setlength{\pdfhorigin}{1truein}%
9230       \setlength{\pdfvorigin}{1truein}%
9231 </pdftex>
9232     \ifportrait
9233       \ifdim\paperwidth=\z@
9234         \else
9235           \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9236         \fi
9237       \ifdim\paperheight=\z@
9238         \else
9239           \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9240         \fi
9241       \else
9242         \ifdim\paperheight=\z@
9243           \else
9244             \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9245           \fi
9246         \ifdim\paperwidth=\z@
9247           \else
9248             \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9249           \fi
9250         \fi

```

```

9251 }{%
9252   \ifnum\mag=\@m
9253     \ifdim\stockwidth>\z@
9254       \ifdim\stockheight>\z@
9255         \setlength{\pdfpagewidth}{\stockwidth}%
9256         \setlength{\pdfpageheight}{\stockheight}%
9257       \else
9258         \ifdim\paperwidth>\z@
9259           \ifdim\paperheight>\z@
9260             \setlength{\pdfpagewidth}{\paperwidth}%
9261             \setlength{\pdfpageheight}{\paperheight}%
9262           \fi
9263         \fi
9264       \fi
9265     \else
9266       \ifdim\stockwidth=\z@
9267         \ifdim\paperwidth>\z@
9268           \ifdim\paperheight>\z@
9269             \setlength{\pdfpagewidth}{\paperwidth}%
9270             \setlength{\pdfpageheight}{\paperheight}%
9271           \fi
9272         \fi
9273       \fi
9274     \fi
9275   \fi
9276 }%
9277 }%
9278 \Hy@DisableOption{setpagesize}%
9279 }
9280 (/pdftex | xetex)
9281 (*pdftex)
9282 \def\Acrobatmenu#1#2{%
9283   \Hy@Acrobatmenu{#1}{#2}{%
9284     \leavevmode
9285     \EdefEscapeName\Hy@temp@menu{#1}%
9286     \pdfstartlink
9287     attr{%
9288       \Hy@setpdfborder
9289       \Hy@setpdfhighlight
9290       \ifx\@menubordercolor\relax
9291         \else
9292         /C[\@menubordercolor]%
9293       \fi
9294     }%
9295     user{%
9296       /Subtype/Link%
9297       \ifHy@pdfa /F 4\fi
9298       /A<<%
9299       /S/Named%
9300       /N/\Hy@temp@menu
9301       \Hy@href@nextactionraw
9302     >>%
9303   }%
9304   \relax

```

```

9305 \Hy@colorlink\@menucolor#2%
9306 \close@pdfink
9307 }%
9308 }

```

43.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands `\pdfstartlink` and `\pdfendlink`, if a link is broken across the first and second output page.

The problem could be fixed by replacing `\AtBeginShipoutFirst`, because the box layer is not necessary for pdfTeX—no `\specials` need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also `\AtBeginShipoutFirst` could be invoked independently from `hyperref`.

Since version 2011/10/05 v1.16 of package 'atbegshi' `\AtBeginShipoutFirst` does not add a additional box layer.

change 2020-10-01: the code has been removed as outdated.

```

9309 </pdfTeX>

```

43.3 hypertex

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: `html:`

name: `html:`

end: `html:`

image: `html:`

base_name: `html:<base href = "href_string">`

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters

should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

9310 (*hypertex)
9311 \providecommand*\XR@ext}{dvi}
9312 \let\PDF@FinishDoc\ltx@empty
9313 \def\PDF@SetupDoc{%
9314   \ifx\@baseurl\@empty
9315   \else
9316     \special{html:<base href="\@baseurl">}%
9317   \fi
9318 }
9319 \Hy@WrapperDef\hyper@anchor#1{%
9320   \Hy@SaveLastskip
9321   \Hy@VerboseAnchor{#1}%
9322   \begingroup
9323     \let\protect=\string
9324     \hyper@chars
9325     \special{html:<a name=%
9326       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9327   \endgroup
9328   \Hy@activeanchortrue
9329   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9330   \special{html:</a>}%
9331   \Hy@activeanchorfalse
9332   \Hy@RestoreLastskip
9333 }
9334 \Hy@WrapperDef\hyper@anchorstart#1{%
9335   \Hy@SaveLastskip
9336   \Hy@VerboseAnchor{#1}%
9337   \begingroup
9338     \hyper@chars
9339     \special{html:<a name=%
9340       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9341   \endgroup
9342   \Hy@activeanchortrue
9343 }
9344 \def\hyper@anchorend{%
9345   \special{html:</a>}%
9346   \Hy@activeanchorfalse
9347   \Hy@RestoreLastskip
9348 }
9349 \def\@urltype{url}
9350 \def\hyper@linkstart#1#2{%
9351   \Hy@VerboseLinkStart{#1}{#2}%
9352   \expandafter\Hy@colorlink\csname @#1color\endcsname
9353   \def\Hy@tempa{#1}%
9354   \ifx\Hy@tempa\@urltype
9355     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9356   \else
9357     \begingroup
9358       \hyper@chars
9359       \special{html:<a href=%
9360         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9361     \endgroup

```



```

9362 \fi
9363 }
9364 \def\hyper@linkend{%
9365 \special{html:</a>}%
9366 \Hy@endcolorlink
9367 }
9368 \def\hyper@linkfile#1#2#3{%
9369 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9370 }
9371 \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.

```

9372 \leavevmode
9373 \ifHy@raiselinks
9374 \Hy@SaveSpaceFactor
9375 \Hy@SaveSavedSpaceFactor
9376 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9377 \Hy@RestoreSavedSpaceFactor
9378 \@linkdim\dp\@tempboxa
9379 \lower\@linkdim\hbox{%
9380 \hyper@chars
9381 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9382 }%
9383 \Hy@colorlink\@urlcolor
9384 \Hy@RestoreSpaceFactor
9385 #1%
9386 \Hy@SaveSpaceFactor
9387 \@linkdim\ht\@tempboxa

```

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

```

9388 \advance\@linkdim by -6.5\p@
9389 \raise\@linkdim\hbox{\special{html:</a>}}%
9390 \Hy@endcolorlink
9391 \Hy@RestoreSpaceFactor
9392 \else
9393 \begingroup
9394 \hyper@chars
9395 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9396 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9397 \special{html:</a>}%
9398 \Hy@endcolorlink
9399 \endgroup
9400 \fi
9401 }

```

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

```

9402 \def\hyper@link#1#2#3{%
9403 \Hy@VerboseLinkStart{#1}{#2}%
9404 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
9405 }

```

```

9406 \def\hyper@image#1#2{%
9407   \begingroup
9408     \hyper@chars
9409     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9410   \endgroup
9411 }
9412 </hypertex>
9413 (*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.

```

9414 \providecommand*\XR@ext}{dvi}
9415 \providecommand\wwwbrowser{c:\string\netscape\string\netscape}
9416 \Hy@WrapperDef\hyper@anchor#1{%
9417   \Hy@SaveLastskip
9418   \Hy@VerboseAnchor{#1}%
9419   \begingroup
9420     \let\protect=\string
9421     \special{mark: #1}%
9422   \endgroup
9423   \Hy@activeanchortrue
9424   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9425   \Hy@activeanchorfalse
9426   \Hy@RestoreLastskip
9427 }
9428 \Hy@WrapperDef\hyper@anchorstart#1{%
9429   \Hy@SaveLastskip
9430   \Hy@VerboseAnchor{#1}%
9431   \special{mark: #1}%
9432   \Hy@activeanchortrue
9433 }
9434 \def\hyper@anchorend{%
9435   \Hy@activeanchorfalse
9436   \Hy@RestoreLastskip
9437 }
9438 \def\hyper@linkstart#1#2{%
9439   \Hy@VerboseLinkStart{#1}{#2}%
9440   \expandafter\Hy@colorlink\csname @#1color\endcsname
9441   \special{button: %
9442     10000000 %
9443     \number\baselineskip\space
9444     #2%

```

```

9445 }%
9446 }
9447 \def\hyper@linkend{%
9448 \Hy@endcolorlink
9449 }
9450 \def\hyper@link#1#2#3{%
9451 \Hy@VerboseLinkStart{#1}{#2}%
9452 \leavevmode
9453 \ifHy@raiselinks
9454 \Hy@SaveSpaceFactor
9455 \Hy@SaveSavedSpaceFactor
9456 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9457 \Hy@RestoreSavedSpaceFactor
9458 \@linkdim\dp\@tempboxa
9459 \lower\@linkdim\hbox{%
9460 \special{button: %
9461 \number\wd\@tempboxa\space
9462 \number\ht\@tempboxa\space
9463 #2%
9464 }%
9465 \expandafter\Hy@colorlink\csname @#1color\endcsname
9466 \Hy@RestoreSpaceFactor
9467 #3\Hy@xspace@end
9468 \Hy@SaveSpaceFactor
9469 \Hy@endcolorlink
9470 }%
9471 \@linkdim\ht\@tempboxa
9472 \advance\@linkdim by -6.5\p@
9473 \raise\@linkdim\hbox{}}%
9474 \Hy@RestoreSpaceFactor
9475 \else
9476 \special{button: %
9477 \number\wd\@tempboxa\space
9478 \number\ht\@tempboxa\space
9479 #2%
9480 }%
9481 \expandafter\Hy@colorlink\csname @#1color\endcsname
9482 #3\Hy@xspace@end
9483 \Hy@endcolorlink
9484 \fi
9485 }
9486 \def\hyper@linkurl#1#2{%
9487 \begingroup
9488 \hyper@chars
9489 \leavevmode
9490 \ifHy@raiselinks
9491 \Hy@SaveSpaceFactor
9492 \Hy@SaveSavedSpaceFactor
9493 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9494 \Hy@RestoreSavedSpaceFactor
9495 \@linkdim\dp\@tempboxa
9496 \lower\@linkdim\hbox{%
9497 \special{button: %
9498 \number\wd\@tempboxa\space

```

```

9499     \number\ht\@tempboxa\space
9500     launch: \wwwbrowser\space
9501     #2%
9502 }%
9503     \Hy@colorlink\@urlcolor
9504     \Hy@RestoreSpaceFactor
9505     #1\Hy@xspace@end
9506     \Hy@SaveSpaceFactor
9507     \Hy@endcolorlink
9508 }%
9509     \@linkdim\ht\@tempboxa
9510     \advance\@linkdim by -6.5\p@
9511     \raise\@linkdim\hbox{}%
9512     \Hy@RestoreSpaceFactor
9513 \else
9514     \special{button: %
9515         \number\wd\@tempboxa\space
9516         \number\ht\@tempboxa\space
9517         launch: \wwwbrowser\space
9518         #2%
9519     }%
9520     \Hy@colorlink\@urlcolor
9521     #1\Hy@xspace@end
9522     \Hy@endcolorlink
9523 \fi
9524 \endgroup
9525 }
9526 \def\hyper@linkfile#1#2#3{%
9527 \begingroup
9528 \hyper@chars
9529 \leavevmode
9530 \ifHy@raiselinks
9531     \Hy@SaveSpaceFactor
9532     \Hy@SaveSavedSpaceFactor
9533     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9534     \Hy@RestoreSavedSpaceFactor
9535     \@linkdim\dp\@tempboxa
9536     \lower\@linkdim\hbox{%
9537         \special{button: %
9538             \number\wd\@tempboxa\space
9539             \number\ht\@tempboxa\space
9540             #3,%
9541             file: #2%
9542         }%
9543         \Hy@colorlink\@filecolor
9544         \Hy@RestoreSpaceFactor
9545         #1\Hy@xspace@end
9546         \Hy@SaveSpaceFactor
9547         \Hy@endcolorlink
9548     }%
9549     \@linkdim\ht\@tempboxa
9550     \advance\@linkdim by -6.5\p@
9551     \raise\@linkdim\hbox{}%
9552     \Hy@RestoreSpaceFactor

```

```

9553 \else
9554 \special{button: %
9555 \number\wd\@tempboxa\space
9556 \number\ht\@tempboxa\space
9557 #3,%
9558 file: #2%
9559 }%
9560 \Hy@colorlink\@filecolor
9561 #1\Hy@xspace@end
9562 \Hy@endcolorlink
9563 \fi
9564 \endgroup
9565 }
9566 \HyInfo@AddonUnsupportedtrue
9567 \def\PDF@FinishDoc{%
9568 \Hy@UseMaketitleInfos
9569 \HyInfo@TrappedUnsupported
9570 \special{PDF: Keywords \@pdfkeywords}%
9571 \special{PDF: Title \@pdftitle}%
9572 \special{PDF: Creator \@pdfcreator}%
9573 \ifx\@pdfcreationdate\@empty
9574 \else
9575 \special{PDF: CreationDate \@pdfcreationdate}%
9576 \fi
9577 \ifx\@pdfmoddate\@empty
9578 \else
9579 \special{PDF: ModDate \@pdfmoddate}%
9580 \fi
9581 \special{PDF: Author \@pdfauthor}%
9582 \ifx\@pdfproducer\relax
9583 \else
9584 \special{PDF: Producer \@pdfproducer}%
9585 \fi
9586 \special{PDF: Subject \@pdfsubject}%
9587 \Hy@DisableOption{pdfauthor}%
9588 \Hy@DisableOption{pdftitle}%
9589 \Hy@DisableOption{pdfsubject}%
9590 \Hy@DisableOption{pdfcreator}%
9591 \Hy@DisableOption{addtopdfcreator}%
9592 \Hy@DisableOption{pdfcreationdate}%
9593 \Hy@DisableOption{pdfcreationdate}%
9594 \Hy@DisableOption{pdfmoddate}%
9595 \Hy@DisableOption{pdfproducer}%
9596 \Hy@DisableOption{pdfkeywords}%
9597 \Hy@DisableOption{pdftrapped}%
9598 \Hy@DisableOption{pdfinfo}%
9599 }
9600 \def\PDF@SetupDoc{%
9601 \ifx\@baseurl\@empty
9602 \else
9603 \special{PDF: Base \@baseurl}%
9604 \fi
9605 \ifx\@pdfpagescrop\@empty\else
9606 \special{PDF: BBox \@pdfpagescrop}%

```

```

9607 \fi
9608 \def\Hy@temp{}%
9609 \ifx\@pdfstartpage\@empty
9610 \else
9611 \ifx\@pdfstartview\@empty
9612 \else
9613 \edef\Hy@temp{%
9614   ,Page=\@pdfstartpage
9615   ,View=\@pdfstartview
9616 }%
9617 \fi
9618 \fi
9619 \edef\Hy@temp{%
9620 \noexpand\pdfmark{%
9621   pdfmark=/DOCVIEW,%
9622   PageMode=/\@pdfpagemode
9623   \Hy@temp
9624 }%
9625 }%
9626 \Hy@temp
9627 \ifx\@pdfpagescrop\@empty
9628 \else
9629 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9630 \fi
9631 \edef\Hy@temp{%
9632 \ifHy@pdftoolbar\else /HideToolbar true\fi
9633 \ifHy@pdfmenubar\else /HideMenubar true\fi
9634 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9635 \ifHy@pdfwindow /FitWindow true\fi
9636 \ifHy@pdfcenterwindow /CenterWindow true\fi
9637 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9638 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9639 \Hy@UseNameKey{Direction}\@pdfdirection
9640 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9641 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9642 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9643 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9644 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9645 \Hy@UseNameKey{Duplex}\@pdfduplex
9646 \ifx\@pdfpicktraybypdfsize\@empty
9647 \else
9648 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9649 \fi
9650 \ifx\@pdfprintpagerange\@empty
9651 \else
9652 /PrintPageRange[\@pdfprintpagerange]%
9653 \fi
9654 \ifx\@pdfnumcopies\@empty
9655 \else
9656 /NumCopies \@pdfnumcopies
9657 \fi
9658 }%
9659 \pdfmark{pdfmark=/PUT,%
9660   Raw={%

```

```

9661 \string{Catalog\string}<<%
9662 \ifx\Hy@temp\@empty
9663 \else
9664 /ViewerPreferences<<\Hy@temp>>%
9665 \fi
9666 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9667 \ifx\@pdflang\relax
9668 \else
9669 /Lang(\@pdflang)%
9670 \fi
9671 >>%
9672 }%
9673 }%
9674 }
9675 </dviwindo>
9676 <*\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.

```

9677 \special{dvipdfmx:config C 0x0010}
9678 \providecommand*\XR@ext}{pdf}
9679 \Hy@setbreaklinks{true}
9680 \def\HyPat@ObjRef{%
9681 @[\ ]+%
9682 }
9683 \newsavebox{\pdfm@box}
9684 \def\@pdfm@mark#1{\special{pdf:#1}}
9685 \Hy@WrapperDef\@pdfm@dest#1{%
9686 \Hy@SaveLastskip
9687 \Hy@VerboseAnchor{#1}%
9688 \begingroup
9689 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9690 \def\x{XYZ}%
9691 \ifx\x\@pdfview
9692 \def\x{XYZ @xpos @ypos null}%
9693 \else
9694 \def\x{FitH}%
9695 \ifx\x\@pdfview
9696 \def\x{FitH @ypos}%
9697 \else
9698 \def\x{FitBH}%
9699 \ifx\x\@pdfview
9700 \def\x{FitBH @ypos}%
9701 \else
9702 \def\x{FitV}%
9703 \ifx\x\@pdfview
9704 \def\x{FitV @xpos}%
9705 \else
9706 \def\x{FitBV}%

```

```

9707     \ifx\x\@pdfview
9708         \def\x{FitBV @xpos}%
9709     \else
9710         \def\x{Fit}%
9711     \ifx\x\@pdfview
9712         \let\x\@pdfview
9713     \else
9714         \def\x{FitB}%
9715     \ifx\x\@pdfview
9716         \let\x\@pdfview
9717     \else
9718         \def\x{FitR}%
9719     \ifx\x\@pdfview
9720         \Hy@Warning{'pdfview=FitR' is not supported}%
9721         \def\x{XYZ @xpos @ypos null}%
9722     \else
9723         \@onelevel@sanitize\@pdfview
9724         \Hy@Warning{%
9725             Unknown value '\@pdfview' for pdfview%
9726         }%
9727         \def\x{XYZ @xpos @ypos null}%
9728     \fi
9729 \fi
9730 \fi
9731 \fi
9732 \fi
9733 \fi
9734 \fi
9735 \fi
9736 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9737 \endgroup
9738 \Hy@RestoreLastskip
9739 }
9740 \providecommand*\@pdfview{XYZ}
9741 \providecommand*\@pdfborder{0 0 1}
9742 \providecommand*\@pdfborderstyle{}
9743 \def\hyper@anchor#1{%
9744     \@pdfm@dest{#1}%
9745 }
9746 \def\hyper@anchorstart#1{%
9747     \Hy@activeanchortrue
9748     \@pdfm@dest{#1}%
9749 }
9750 \def\hyper@anchorend{%
9751     \Hy@activeanchorfalse
9752 }
9753 \newcounter{Hy@AnnotLevel}
9754 \ifHy@ocgcolorlinks
9755     \def\OBJ@OCG@view{@OCG@view}%
9756     \@pdfm@mark{%
9757         obj \OBJ@OCG@view <<%
9758         /Type/OCG%
9759         /Name(View)%

```



```

9760 /Usage<<%
9761 /Print<<%
9762 /PrintState/OFF%
9763 >>%
9764 /View<<%
9765 /ViewState/ON%
9766 >>%
9767 >>%
9768 >>%
9769 }%
9770 \@pdfm@mark{close \OBJ@OCG@view}%
9771 \def\OBJ@OCG@print{@OCG@print}%
9772 \@pdfm@mark{%
9773 obj \OBJ@OCG@print <<%
9774 /Type/OCG%
9775 /Name(Print)%
9776 /Usage<<%
9777 /Print<<%
9778 /PrintState/ON%
9779 >>%
9780 /View<<%
9781 /ViewState/OFF%
9782 >>%
9783 >>%
9784 >>%
9785 }%
9786 \@pdfm@mark{close \OBJ@OCG@print}%
9787 \def\OBJ@OCGs{@OCGs}%
9788 \@pdfm@mark{%
9789 obj \OBJ@OCGs [%
9790 \OBJ@OCG@view\space\OBJ@OCG@print
9791 ]%
9792 }%
9793 \@pdfm@mark{close \OBJ@OCGs}%
9794 \@pdfm@mark{%
9795 put @catalog <<%
9796 /OCProperties<<%
9797 /OCGs \OBJ@OCGs
9798 /D<<%
9799 /OFF[\OBJ@OCG@print]%
9800 /AS[%
9801 <<%
9802 /Event/View%
9803 /OCGs \OBJ@OCGs
9804 /Category[/View]%
9805 >>%
9806 <<%
9807 /Event/Print%
9808 /OCGs \OBJ@OCGs
9809 /Category[/Print]%
9810 >>%
9811 <<%
9812 /Event/Export%
9813 /OCGs \OBJ@OCGs

```

```

9814         /Category[/Print]%
9815         >>%
9816     ]%
9817     >>%
9818     >>%
9819     >>%
9820 }%
9821 \AtBeginShipout{%
9822     \setbox\AtBeginShipoutBox=\hbox{%
9823         \copy\AtBeginShipoutBox
9824         \@pdfm@mark{%
9825             put @resources <<%
9826             /Properties<<%
9827             /OCView \OBJ@OCG@view
9828             /OCPrint \OBJ@OCG@print
9829             >>%
9830             >>%
9831         }%
9832     }%
9833 }%
9834 \Hy@AtBeginDocument{%
9835     \def\Hy@colorlink#1{%
9836         \begingroup
9837         \ifHy@ocgcolorlinks
9838             \def\Hy@ocgcolor{#1}%
9839             \setbox0=\hbox\bgroup\color@begingroup
9840         \else
9841             \HyColor@UseColor#1%
9842         \fi
9843     }%
9844     \def\Hy@endcolorlink{%
9845         \ifHy@ocgcolorlinks
9846             \color@endgroup\egroup
9847             \mbox{%
9848                 \@pdfm@mark{content /OC/OCPrint BDC}%
9849                 \rlap{\copy0}%
9850                 \@pdfm@mark{content EMC/OC/OCView BDC}%
9851             \begingroup
9852                 \expandafter\HyColor@UseColor\Hy@ocgcolor
9853                 \box0 %
9854             \endgroup
9855             \@pdfm@mark{content EMC}%
9856         }%
9857     \fi
9858     \endgroup
9859 }%
9860 }%
9861 \else
9862 \Hy@DisableOption{ocgcolorlinks}%
9863 \fi

```

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

```

9864 \def\Hy@BeginAnnot#1{%

```

```

9865 \global\advance\c@Hy@AnnotLevel\@ne
9866 \ifnum\c@Hy@AnnotLevel=\@ne
9867   #1%
9868 \fi
9869 }
9870 \def\Hy@endAnnot{%
9871 \ifnum\value{Hy@AnnotLevel}=\@ne
9872 \Hy@endcolorlink
9873 \@pdfm@mark{eann}%
9874 \fi
9875 \global\advance\c@Hy@AnnotLevel\m@ne
9876 }

9877 \def\Hy@undefinedname{UNDEFINED}
9878 \def\hyper@linkstart#1#2{%
9879 \Hy@VerboseLinkStart{#1}{#2}%
9880 \leavevmode
9881 \Hy@BeginAnnot{%
9882 \protected@edef\Hy@testname{#2}%
9883 \ifx\Hy@testname\@empty
9884 \Hy@Warning{%
9885   Empty destination name,\MessageBreak
9886   using '\Hy@undefinedname'%
9887 }%
9888 \let\Hy@testname\Hy@undefinedname
9889 \else
9890 \Hy@pstringdef\Hy@testname{%
9891 \expandafter\HyperDestNameFilter\expandafter{%
9892 \Hy@testname
9893 }%
9894 }%
9895 \fi
9896 \@pdfm@mark{%
9897   bann<<%
9898   /Type/Annot%
9899   /Subtype/Link%
9900   \ifHy@pdfa /F 4\fi
9901   \Hy@setpdfborder
9902   \Hy@setpdfhighlight
9903   \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9904   \else
9905     /C[\csname @#1bordercolor\endcsname]%
9906   \fi
9907   /A<<%
9908   /S/GoTo%
9909   /D(\Hy@testname)%
9910   \Hy@href@nextactionraw
9911   >>%
9912   >>%
9913 }%
9914 \expandafter\Hy@colorlink\csname @#1color\endcsname
9915 }%
9916 }
9917 \def\hyper@linkend{\Hy@endAnnot}%
9918 \def\hyper@link#1#2#3{%

```

```

9919 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
9920 }
9921 \def\hyper@linkfile#1#2#3{%
9922 \leavevmode
9923 \Hy@BeginAnnot{%
9924 \def\Hy@pstringF{#2}%
9925 \Hy@CleanupFile\Hy@pstringF
9926 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9927 \Hy@pstringdef\Hy@pstringD{#3}%
9928 \Hy@MakeRemoteAction
9929 \@pdfm@mark{%
9930 bann<<%
9931 /Type/Annot%
9932 /Subtype/Link%
9933 \ifHy@pdfa /F 4\fi
9934 \Hy@setpdfborder
9935 \Hy@setpdfhighlight
9936 \ifx\@filebordercolor\relax
9937 \else
9938 /C[\@filebordercolor]%
9939 \fi
9940 /A<<%
9941 /S/GoToR%
9942 /F(\Hy@pstringF)%
9943 /D%
9944 \ifx\#3\%
9945 [\Hy@href@page\@pdfremotestartview]%
9946 \else
9947 (\Hy@pstringD)%
9948 \fi
9949 \Hy@SetNewWindow
9950 \Hy@href@nextactionraw
9951 >>%
9952 >>%
9953 }%
9954 \Hy@colorlink\@filecolor
9955 }%
9956 #1\Hy@xspace@end
9957 \Hy@endAnnot
9958 }
9959 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9960 \leavevmode
9961 \Hy@BeginAnnot{%
9962 \Hy@pstringdef\Hy@pstringF{#1}%
9963 \Hy@pstringdef\Hy@pstringP{#3}%
9964 \@pdfm@mark{%
9965 bann<<%
9966 /Type/Annot%
9967 /Subtype/Link%
9968 \ifHy@pdfa /F 4\fi
9969 \Hy@setpdfborder
9970 \Hy@setpdfhighlight
9971 \ifx\@runbordercolor\relax
9972 \else

```

```

9973      /C[\@runbordercolor]%
9974      \fi
9975      /A<<%
9976      /F(\Hy@pstringF)%
9977      /S/Launch%
9978      \Hy@SetNewWindow
9979      \ifx\#\#3\%
9980      \else
9981      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9982      \fi
9983      \Hy@href@nextactionraw
9984      >>%
9985      >>%
9986      }%
9987      \Hy@colorlink\@runcolor
9988      }%
9989      #2\Hy@xspace@end
9990      \Hy@EndAnnot
9991      }
9992      \def\hyper@linkurl#1#2{%
9993      \leavevmode
9994      \Hy@BeginAnnot{%
9995      \Hy@pstringdef\Hy@pstringURI{#2}%
9996      \@pdfm@mark{%
9997      bann<<%
9998      /Type/Annot%
9999      /Subtype/Link%
10000     \ifHy@pdfa /F 4\fi
10001     \Hy@setpdfborder
10002     \Hy@setpdfhighlight
10003     \ifx\@urlbordercolor\relax
10004     \else
10005     /C[\@urlbordercolor]%
10006     \fi
10007     /A<<%
10008     /S/URI%
10009     /URI(\Hy@pstringURI)%
10010     \ifHy@href@ismap
10011     /IsMap true%
10012     \fi
10013     \Hy@href@nextactionraw
10014     >>%
10015     >>%
10016     }%
10017     \Hy@colorlink\@urlcolor
10018     }%
10019     #1\Hy@xspace@end
10020     \Hy@EndAnnot
10021     }
10022     \def\Acrobatmenu#1#2{%
10023     \Hy@Acrobatmenu{#1}{#2}{%
10024     \Hy@BeginAnnot{%
10025     \EdefEscapeName\Hy@temp@menu{#1}%
10026     \@pdfm@mark{%

```

```

10027     bann<<%
10028         /Type/Annot%
10029         /Subtype/Link%
10030         \ifHy@pdfa /F 4\fi
10031         \Hy@setpdfborder
10032         \Hy@setpdfhighlight
10033         \ifx\@menubordercolor\relax
10034         \else
10035             /C[\@menubordercolor]%
10036         \fi
10037         /A<<%
10038         /S/Named%
10039         /N/\Hy@temp@menu
10040         \Hy@href@nextactionraw
10041         >>%
10042     >>%
10043 }%
10044 \Hy@colorlink\@menucolor
10045 }%
10046 #2\Hy@xspace@end
10047 \Hy@endAnnot
10048 }%
10049 }
10050
10051 \def\PDF@FinishDoc{%
10052     \Hy@UseMaketitleInfos
10053     \HyInfo@GenerateAddons
10054     \@pdfm@mark{%
10055         docinfo<<%
10056             /Title(\@pdftitle)%
10057             /Subject(\@pdfsubject)%
10058             /Creator(\@pdfcreator)%
10059             \ifx\@pdfcreationdate\@empty
10060             \else
10061                 /CreationDate(\@pdfcreationdate)%
10062             \fi
10063             \ifx\@pdfmoddate\@empty
10064             \else
10065                 /ModDate(\@pdfmoddate)%
10066             \fi
10067             /Author(\@pdfauthor)%
10068             \ifx\@pdfproducer\relax
10069             \else
10070                 /Producer(\@pdfproducer)%
10071             \fi
10072             /Keywords(\@pdfkeywords)%
10073             \ifx\@pdftrapped\@empty
10074             \else
10075                 /Trapped/\@pdftrapped
10076             \fi
10077             \HyInfo@Addons
10078         >>%
10079     }%
10080     \Hy@DisableOption{pdfauthor}%

```

```

10081 \Hy@DisableOption{pdftitle}%
10082 \Hy@DisableOption{pdfsubject}%
10083 \Hy@DisableOption{pdfcreator}%
10084 \Hy@DisableOption{addtopdfcreator}%
10085 \Hy@DisableOption{pdfcreationdate}%
10086 \Hy@DisableOption{pdfcreationdate}%
10087 \Hy@DisableOption{pdfmoddate}%
10088 \Hy@DisableOption{pdfproducer}%
10089 \Hy@DisableOption{pdfkeywords}%
10090 \Hy@DisableOption{pdftrapped}%
10091 \Hy@DisableOption{pdfinfo}%
10092 }

10093 \def\PDF@SetupDoc{%
10094 \edef\Hy@temp{%
10095 \ifHy@pdftoolbar\else /HideToolbar true\fi
10096 \ifHy@pdfmenubar\else /HideMenubar true\fi
10097 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10098 \ifHy@pdffitwindow /FitWindow true\fi
10099 \ifHy@pdfcenterwindow /CenterWindow true\fi
10100 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10101 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10102 \Hy@UseNameKey{Direction}\@pdfdirection
10103 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10104 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10105 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10106 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10107 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10108 \Hy@UseNameKey{Duplex}\@pdfduplex
10109 \ifx\@pdfpicktraybypdfsize\@empty
10110 \else
10111 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10112 \fi
10113 \ifx\@pdfprintpagerange\@empty
10114 \else
10115 /PrintPageRange[\@pdfprintpagerange]%
10116 \fi
10117 \ifx\@pdfnumcopies\@empty
10118 \else
10119 /NumCopies \@pdfnumcopies
10120 \fi
10121 }%
10122 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10123 \@pdfm@mark{%
10124 docview<<%
10125 \ifx\@pdfstartpage\@empty
10126 \else
10127 \ifx\@pdfstartview\@empty
10128 \else
10129 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10130 \fi
10131 \fi
10132 \ifx\@baseurl\@empty
10133 \else
10134 /URI<</Base(\Hy@pstringB)>>%

```

```

10135 \fi
10136 /PageMode/\@pdfpagemode
10137 \ifx\Hy@temp\@empty
10138 \else
10139 /ViewerPreferences<<\Hy@temp>>%
10140 \fi
10141 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10142 \ifx\@pdflang\relax
10143 \else
10144 /Lang(\@pdflang)%
10145 \fi
10146 >>%
10147 }%
10148 \ifx\@pdfpagescrop\@empty
10149 \else
10150 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10151 \fi
10152 }
10153 </dvipdfm | xetex>
10154 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

10155 \def\hyper@pagetransition{%
10156 \ifx\@pdfpagetransition\relax
10157 \else
10158 \ifx\@pdfpagetransition\@empty
10159 \else
10160 \special{pdf:put @thispage %
10161 <</Trans<</S/\@pdfpagetransition>>>>%
10162 }%
10163 \fi
10164 \fi
10165 }

```

\hyper@pageduration

```

10166 \def\hyper@pageduration{%
10167 \ifx\@pdfpageduration\relax
10168 \else
10169 \ifx\@pdfpageduration\@empty
10170 \else
10171 \special{pdf:put @thispage %
10172 <</Dur \@pdfpageduration>>>>%
10173 }%
10174 \fi
10175 \fi
10176 }

10177 \g@addto@macro\Hy@EveryPageBoxHook{%
10178 \hyper@pagetransition
10179 \hyper@pageduration
10180 }
10181 </dvipdfm | xetex>

```


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

```

10182 (*dvipdfm)
10183 \AtBeginShipoutFirst{%
10184   \ifHy@setpagesize
10185     \begingroup
10186       \ifnum\mag=\@m
10187         \ifdim\stockwidth>\z@
10188           \ifdim\stockheight>\z@
10189             \special{papersize=\the\stockwidth,\the\stockheight}%
10190           \else
10191             \ifdim\paperwidth>\z@
10192               \ifdim\paperheight>\z@
10193                 \special{papersize=\the\paperwidth,\the\paperheight}%
10194               \fi
10195             \fi
10196           \fi
10197         \else
10198           \ifdim\stockwidth=\z@
10199             \ifdim\paperwidth>\z@
10200               \ifdim\paperheight>\z@
10201                 \special{papersize=\the\paperwidth,\the\paperheight}%
10202               \fi
10203             \fi
10204           \fi
10205         \fi
10206       \fi
10207     \endgroup
10208   \fi
10209 \Hy@DisableOption{setpagesize}%
10210 }
10211 </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.

```

10212 (*vtexhtml)
10213 \providecommand*\XR@ext}{htm}
10214 \RequirePackage{vtexhtml}
10215 \newif\if@Localurl
10216 \let\PDF@FinishDoc\ltx@empty
10217 \def\PDF@SetupDoc{%
10218   \ifx\@baseurl\@empty
10219     \else
10220       \special{!direct <base href="\@baseurl">}%
10221     \fi
10222 }
10223 \def\@urltype{url}
10224 \def\hyper@link#1#2#3{%
10225   \Hy@VerboseLinkStart{#1}{#2}%
10226   \leavevmode
10227   \special{!direct <a href=%

```

```

10228     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10229 #3\Hy@xspace@end
10230 \special{!direct </a>}%
10231 }
10232 \def\hyper@linkurl#1#2{%
10233   \begingroup
10234     \hyper@chars
10235     \leavevmode
10236     \MathBSuppress=1\relax
10237     \special{!direct <a href=%
10238       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10239     #1\Hy@xspace@end
10240     \MathBSuppress=0\relax
10241     \special{!direct </a>}%
10242   \endgroup
10243 }
10244 \def\hyper@linkfile#1#2#3{%
10245   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
10246 }
10247 \def\hyper@linkstart#1#2{%
10248   \Hy@VerboseLinkStart{#1}{#2}%
10249   \def\Hy@tempa{#1}\ifx\Hy@tempa \@urlytype
10250     \@Localurltrue
10251     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10252   \else
10253     \@Localurlfalse
10254     \begingroup
10255       \hyper@chars
10256       \special{!aref \HyperDestNameFilter{#2}}%
10257     \endgroup
10258   \fi
10259 }
10260 \def\hyper@linkend{%
10261   \if@Localurl
10262     \special{!endaref}%
10263   \else
10264     \special{!direct </a>}%
10265   \fi
10266 }
10267 \Hy@WrapperDef\hyper@anchorstart#1{%
10268   \Hy@SaveLastskip
10269   \Hy@VerboseAnchor{#1}%
10270   \begingroup
10271     \hyper@chars
10272     \special{!aname #1}%
10273     \special{!direct <a name=%
10274       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10275   \endgroup
10276   \Hy@activeanchortrue
10277 }
10278 \def\hyper@anchorend{%
10279   \special{!direct </a>}%
10280   \Hy@activeanchorfalse
10281   \Hy@RestoreLastskip

```

```

10282 }
10283 \Hy@WrapperDef\hyper@anchor#1{%
10284 \Hy@SaveLastskip
10285 \Hy@VerboseAnchor{#1}%
10286 \begingroup
10287 \let\protect=\string
10288 \hyper@chars
10289 \leavevmode
10290 \special{!aname #1}%
10291 \special{!direct <a name=%
10292 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10293 \endgroup
10294 \Hy@activeanchortrue
10295 \bgroup\anchor@spot\egroup
10296 \special{!direct </a>}%
10297 \Hy@activeanchorfalse
10298 \Hy@RestoreLastskip
10299 }
10300 \def\@Form[#1]{%
10301 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10302 }
10303 \let\@endForm\ltx@empty
10304 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10305 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10306 }
10307 \def\@TextField[#1]#2{% parameters, label
10308 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10309 }
10310 \def\@CheckBox[#1]#2{% parameters, label
10311 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10312 }
10313 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10314 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10315 }
10316 \def\@PushButton[#1]#2{% parameters, label
10317 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10318 }
10319 \def\@Reset[#1]#2{%
10320 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10321 }
10322 \def\@Submit[#1]#2{%
10323 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10324 }
10325 </vtexhtml>
10326 <*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.

```

10327 \ifcsname mediaheight\endcsname
10328 \ifHy@setpagesize
10329 \providecommand*\VTeXInitMediaSize{%
10330 \ifnum\mag=\@m
10331 \ifdim\stockwidth>\z@

```

```

10332     \ifdim\stockheight>\z@
10333         \setlength\mediaheight\stockheight
10334         \setlength\mediawidth\stockwidth
10335     \else
10336         \ifdim\paperwidth>\z@
10337             \ifdim\paperheight>\z@
10338                 \setlength\mediaheight\paperheight
10339                 \setlength\mediawidth\paperwidth
10340             \fi
10341         \fi
10342     \fi
10343 \else
10344     \ifdim\stockwidth=\z@
10345         \ifdim\paperwidth>\z@
10346             \ifdim\paperheight>\z@
10347                 \setlength\mediaheight\paperheight
10348                 \setlength\mediawidth\paperwidth
10349             \fi
10350         \fi
10351     \fi
10352 \fi
10353 \fi
10354 }%
10355 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10356 \fi
10357 \Hy@DisableOption{setpagesize}%
10358 \fi

```

Older versions of VTeX require xyz in lower case.

```

10359 \providecommand*\@pdfview{xyz}
10360 \providecommand*\@pdfborder{0 0 1}
10361 \providecommand*\@pdfborderstyle{}
10362 \let\CurrentBorderColor\@linkbordercolor
10363 \Hy@WrapperDef\hyper@anchor#1{%
10364   \Hy@SaveLastskip
10365   \Hy@VerboseAnchor{#1}%
10366   \begingroup
10367     \let\protect=\string
10368     \hyper@chars
10369     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10370   \endgroup
10371   \Hy@activeanchortrue
10372   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10373   \Hy@activeanchorfalse
10374   \Hy@RestoreLastskip
10375 }
10376 \Hy@WrapperDef\hyper@anchorstart#1{%
10377   \Hy@SaveLastskip
10378   \Hy@VerboseAnchor{#1}%
10379   \begingroup
10380     \hyper@chars
10381     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10382   \endgroup
10383   \Hy@activeanchortrue
10384 }

```

```

10385 \def\hyper@anchorend{%
10386 \Hy@activeanchorfalse
10387 \Hy@RestoreLastskip
10388 }
10389 \def\@urltype{url}
10390 \def\Hy@undefinedname{UNDEFINED}
10391 \def\hyper@linkstart#1#2{%
10392 \Hy@VerboseLinkStart{#1}{#2}%
10393 \Hy@pstringdef\Hy@pstringURI{#2}%
10394 \expandafter\Hy@colorlink\csname @#1color\endcsname
10395 \ltx@ifundefined{#@#1bordercolor}{%
10396 \let\CurrentBorderColor\relax
10397 }{%
10398 \edef\CurrentBorderColor{%
10399 \csname @#1bordercolor\endcsname
10400 }%
10401 }%
10402 \def\Hy@tempa{#1}%
10403 \ifx\Hy@tempa\@urltype
10404 \special{!%
10405 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10406 \ifHy@href@ismap
10407 /IsMap true%
10408 \fi
10409 \Hy@href@nextactionraw
10410 >,%
10411 a=<%
10412 \ifHy@pdfa /F 4\fi
10413 \Hy@setpdfborder
10414 \ifx\CurrentBorderColor\relax
10415 \else
10416 /C [\CurrentBorderColor]%
10417 \fi
10418 >%
10419 }%
10420 \else
10421 \protected@edef\Hy@testname{#2}%
10422 \ifx\Hy@testname\@empty
10423 \Hy@Warning{%
10424 Empty destination name,\MessageBreak
10425 using `\'Hy@undefinedname'%
10426 }%
10427 \let\Hy@testname\Hy@undefinedname
10428 \fi
10429 \special{!%
10430 aref \expandafter\HyperDestNameFilter
10431 \expandafter{\Hy@testname};%
10432 a=<%
10433 \ifHy@pdfa /F 4\fi
10434 \Hy@setpdfborder
10435 \ifx\CurrentBorderColor\relax
10436 \else
10437 /C [\CurrentBorderColor]%
10438 \fi

```

```

10439 >%
10440 }%
10441 \fi
10442 }
10443 \def\hyper@linkend{%
10444 \special{!endaref}%
10445 \Hy@endcolorlink
10446 }
10447 \def\hyper@linkfile#1#2#3{%
10448 \leavevmode
10449 \def\Hy@pstringF{#2}%
10450 \Hy@CleanupFile\Hy@pstringF
10451 \special{!%
10452   aref <%
10453   \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
10454   f=\Hy@pstringF>#3;%
10455   a=<%
10456   \ifHy@pdfa /F 4\fi
10457   \Hy@setpdfborder
10458   \ifx\@filebordercolor\relax
10459   \else
10460     /C [\@filebordercolor]%
10461   \fi
10462   >%
10463 }%
10464 \Hy@colorlink\@filecolor
10465 #1\Hy@xspace@end
10466 \Hy@endcolorlink
10467 \special{!endaref}%
10468 }
10469 \def\hyper@linkurl#1#2{%
10470 \begingroup
10471 \Hy@pstringdef\Hy@pstringURI{#2}%
10472 \hyper@chars
10473 \leavevmode
10474 \special{!%
10475   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10476   \ifHy@href@ismap
10477     /IsMap true%
10478   \fi
10479   \Hy@href@nextactionraw
10480   >;%
10481   a=<%
10482   \ifHy@pdfa /F 4\fi
10483   \Hy@setpdfborder
10484   \ifx\@urlbordercolor\relax
10485   \else
10486     /C [\@urlbordercolor]%
10487   \fi
10488   >%
10489 }%
10490 \Hy@colorlink\@urlcolor
10491 #1\Hy@xspace@end
10492 \Hy@endcolorlink

```

```

10493 \special{!endaref}%
10494 \endgroup
10495 }
10496 \def\hyper@link#1#2#3{%
10497 \Hy@VerboseLinkStart{#1}{#2}%
10498 \ltx@ifundefined{#@#1bordercolor}{%
10499 \let\CurrentBorderColor\relax
10500 }{%
10501 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
10502 }%
10503 \leavevmode
10504 \protected@edef\Hy@testname{#2}%
10505 \ifx\Hy@testname\@empty
10506 \Hy@Warning{%
10507 Empty destination name,\MessageBreak
10508 using \Hy@undefinedname'%
10509 }%
10510 \let\Hy@testname\Hy@undefinedname
10511 \fi
10512 \special{!%
10513 aref \expandafter\HyperDestNameFilter
10514 \expandafter{\Hy@testname};%
10515 a=<%
10516 \ifHy@pdfa /F 4\fi
10517 \Hy@setpdfborder
10518 \ifx\CurrentBorderColor\relax
10519 \else
10520 /C [\CurrentBorderColor]%
10521 \fi
10522 >%
10523 }%
10524 \expandafter
10525 \Hy@colorlink\csname @#1color\endcsname
10526 #3\Hy@xspace@end
10527 \Hy@endcolorlink
10528 \special{!endaref}%
10529 }
10530 \def\hyper@image#1#2{%
10531 \hyper@linkurl{#2}{#1}%
10532 }
10533 \def\@hyper@launch run:#1\#2#3{%
10534 \Hy@pstringdef\Hy@pstringF{#1}%
10535 \Hy@pstringdef\Hy@pstringP{#3}%
10536 \leavevmode
10537 \special{!aref %
10538 <u=%
10539 /Type/Action%
10540 /S/Launch%
10541 /F(\Hy@pstringF)%
10542 \Hy@SetNewWindow
10543 \ifx\#3\%
10544 \else
10545 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10546 \fi

```

```

10547 \Hy@href@nextactionraw
10548 >:%
10549 a=<%
10550 \ifHy@pdfa /F 4\fi
10551 \Hy@setpdfborder
10552 \ifx\@runbordercolor\relax
10553 \else
10554 /C[\@runbordercolor]%
10555 \fi
10556 >%
10557 }%
10558 \Hy@colorlink\@runcolor
10559 #2\Hy@xspace@end
10560 \Hy@endcolorlink
10561 \special{!endaref}%
10562 }
10563 \def\Acrobatmenu#1#2{%
10564 \EdefEscapeName\Hy@temp@menu{#1}%
10565 \Hy@Acrobatmenu{#1}{#2}{%
10566 \special{!%
10567 aref <u=/S /Named /N /\Hy@temp@menu>;%
10568 a=<%
10569 \ifHy@pdfa /F 4\fi
10570 \Hy@setpdfborder
10571 \ifx\@menubordercolor\relax
10572 \else
10573 /C[\@menubordercolor]%
10574 \fi
10575 >%
10576 }%
10577 \Hy@colorlink\@menucolor
10578 #2\Hy@xspace@end
10579 \Hy@endcolorlink
10580 \special{!endaref}%
10581 }%
10582 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for V_TE_X 7.02 or later.

Please never use `\@ifundefined{VTeXversion}{..}{..}` *globally*.

```

10583 \ifnum\Hy@VTeXversion<702 %
10584 \else
10585 \def\hyper@pagetransition{%
10586 \ifx\@pdfpagetransition\relax
10587 \else
10588 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

10589 \else
10590 \hvtex@parse@trans\@pdfpagetransition
10591 \fi
10592 \fi
10593 }%

```


I have to write an “honest” parser to convert raw PDF code into `VTeX \special`.
(AVK)

Syntax of `VTeX \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:

```

10594 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
10595 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
10596 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
10597 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
10598 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
10599 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
10600 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

10601 \def\hvtex@par@dimension{/Dm}%
10602 \def\hvtex@par@direction{/Di}%
10603 \def\hvtex@par@duration{/D}%
10604 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

10605 \def\hvtex@gettoken{%
10606   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
10607 }%

```

Notice that tokens in the input buffer must be space delimited.

```

10608 \def\hvtex@gettoken@#1 #2\@nil{%
10609   \edef\hvtex@token{#1}%
10610   \edef\hvtex@buffer{#2}%
10611 }%
10612 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

10613 \let\hvtex@trans@code\@empty
10614 \let\hvtex@param@dimension\@empty
10615 \let\hvtex@param@direction\@empty
10616 \let\hvtex@param@duration\@empty
10617 \let\hvtex@param@motion\@empty
10618 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```
10619 \hvtex@gettoken
10620 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
10621 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
10622 \else
10623 \hvtex@gettoken
10624 \fi
10625 \fi
10626 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
10627 \hvtex@trans@params
10628 }%
```

Reentrant macro to parse optional parameters.

```
10629 \def\hvtex@trans@params{%
10630 \ifx\hvtex@buffer\@empty
10631 \else
10632 \hvtex@gettoken
10633 \let\hvtex@trans@par\hvtex@token
10634 \ifx\hvtex@buffer\@empty
10635 \else
10636 \hvtex@gettoken
10637 \ifx\hvtex@trans@par\hvtex@par@duration
```

/D is the effect duration in seconds. \TeX special takes it in milliseconds.

```
10638 \let\hvtex@param@duration\hvtex@token
10639 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
10640 \expandafter\edef\expandafter\hvtex@param@motion
10641 \expandafter{\expandafter\@gobble\hvtex@token}%
10642 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
10643 \expandafter\edef\expandafter\hvtex@param@dimension
10644 \expandafter{\expandafter\@gobble\hvtex@token}%
10645 \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).

```
10646 \let\hvtex@param@direction\hvtex@token
10647 \fi\fi\fi\fi
10648 \fi
10649 \fi
10650 \ifx\hvtex@buffer\@empty
10651 \let\next\hvtex@produce@trans
10652 \else
10653 \let\next\hvtex@trans@params
10654 \fi
10655 \next
10656 }%
```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

10657 \def\hvtex@produce@trans{%
10658 \let\vtex@trans@special\@empty
10659 \if S\hvtex@trans@code
10660 \edef\vtex@trans@special{\hvtex@trans@code
10661 \hvtex@param@dimension\hvtex@param@motion}%
10662 \else\if B\hvtex@trans@code
10663 \edef\vtex@trans@special{%
10664 \hvtex@trans@code\hvtex@param@dimension
10665 }%
10666 \else\if X\hvtex@trans@code
10667 \edef\vtex@trans@special{%
10668 \hvtex@trans@code\hvtex@param@motion
10669 }%
10670 \else\if W\hvtex@trans@code
10671 \edef\vtex@trans@special{%
10672 \hvtex@trans@code\hvtex@param@direction
10673 }%
10674 \else\if D\hvtex@trans@code
10675 \let\vtex@trans@special\hvtex@trans@code
10676 \else\if R\hvtex@trans@code
10677 \let\vtex@trans@special\hvtex@trans@code
10678 \else\if G\hvtex@trans@code
10679 \edef\vtex@trans@special{%
10680 \hvtex@trans@code\hvtex@param@direction
10681 }%
10682 \fi\fi\fi\fi\fi\fi
10683 \ifx\vtex@trans@special\@empty
10684 \else
10685 \ifx\hvtex@param@duration\@empty
10686 \else
10687 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

10688 \multiply\dimen@\@m
10689 \edef\vtex@trans@special{%
10690 \vtex@trans@special,\strip@pt\dimen@
10691 }%
10692 \fi

```

And all the mess is just for this.

```

10693 \special{!trans \vtex@trans@special}%
10694 \fi
10695 }%

10696 \def\hyper@pageduration{%
10697 \ifx\@pdfpageduration\relax
10698 \else
10699 \ifx\@pdfpageduration\@empty
10700 \special{!duration-}%
10701 \else
10702 \special{!duration \@pdfpageduration}%
10703 \fi
10704 \fi

```

```

10705 }%
10706 \g@addto@macro\Hy@EveryPageBoxHook{%
10707   \hyper@pagetransition
10708   \hyper@pageduration
10709 }%
10710 \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

```

10711 \ifx\@pdfproducer\relax
10712   \def\@pdfproducer{VTeX}%
10713   \ifnum\Hy@VTeXversion>\z@
10714     \count@\VTeXversion
10715     \divide\count@ 100 %
10716     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
10717     \multiply\count@ -100 %
10718     \advance\count@\VTeXversion
10719     \edef\@pdfproducer{%
10720       \@pdfproducer
10721       .\ifnum\count@<10 0\fi\the\count@
10722     \ifx\VTeXOS\@undefined\else
10723       \ifnum\VTeXOS>0 %
10724         \ifnum\VTeXOS<6 %
10725           \space(%
10726           \ifcase\VTeXOS
10727             \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
10728           \fi
10729           )%
10730         \fi
10731       \fi
10732     \fi
10733     ,\space
10734     \ifnum\OpMode=\@ne PDF\else PS\fi
10735     \space backend%
10736     \ifx\gexmode\@undefined\else
10737       \ifnum\gexmode>\z@\space with GeX\fi
10738     \fi
10739   }%
10740 \fi
10741 \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).

```

10742 \def\PDF@SetupDoc{%
10743   \ifx\@pdfpagescrop\@empty
10744   \else
10745     \special{!pdfinfo b=<\@pdfpagescrop>}%
10746   \fi
10747   \ifx\@pdfstartpage\@empty
10748   \else
10749     \ifx\@pdfstartview\@empty
10750     \else
10751       \special{!onopen Page\@pdfstartpage}%
10752     \fi
10753   \fi
10754   \special{!pdfinfo p=</\@pdfpagemode>}%
10755   \ifx\@baseurl\@empty
10756   \else
10757     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
10758   \fi
10759   \special{!pdfinfo v=<<<%
10760     \ifHy@pdftoolbar\else /HideToolbar true\fi
10761     \ifHy@pdfmenubar\else /HideMenubar true\fi
10762     \ifHy@pdfwindowui\else /HideWindowUI true\fi
10763     \ifHy@pdfwindow /FitWindow true\fi
10764     \ifHy@pdfcenterwindow /CenterWindow true\fi
10765     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10766     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10767     \Hy@UseNameKey{Direction}\@pdfdirection
10768     \Hy@UseNameKey{ViewArea}\@pdfviewarea
10769     \Hy@UseNameKey{ViewClip}\@pdfviewclip
10770     \Hy@UseNameKey{PrintArea}\@pdfprintarea
10771     \Hy@UseNameKey{PrintClip}\@pdfprintclip
10772     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10773     \Hy@UseNameKey{Duplex}\@pdfduplex
10774     \ifx\@pdfpicktraybypdfsize\@empty
10775     \else
10776       /PickTrayByPDFSize \@pdfpicktraybypdfsize
10777     \fi
10778     \ifx\@pdfprintpagerange\@empty
10779     \else
10780       /PrintPageRange[\@pdfprintpagerange]%
10781     \fi

```

```

10782 \ifx\@pdfnumcopies\@empty
10783 \else
10784 /NumCopies \@pdfnumcopies
10785 \fi
10786 >>>}%
10787 \ifx\@pdfpagelayout\@empty
10788 \else
10789 \special{!pdffinfo l=</\@pdfpagelayout\space>}%
10790 \fi
10791 }%
10792 \HyInfo@AddonUnsupportedtrue
10793 \define@key{Hyp}{pdfcreationdate}{%
10794 \Hy@Warning{%
10795 VTeX does not support pdfcreationdate.\MessageBreak
10796 Therefore its setting is ignored%
10797 }%
10798 }
10799 \define@key{Hyp}{pdfmoddate}{%
10800 \Hy@Warning{%
10801 VTeX does not support pdfmoddate.\MessageBreak
10802 Therefore its setting is ignored%
10803 }%
10804 }
10805 \def\PDF@FinishDoc{%
10806 \Hy@UseMaketitleInfos
10807 \HyInfo@TrappedUnsupported
10808 \special{!pdffinfo a=<\@pdfauthor>}%
10809 \special{!pdffinfo t=<\@pdftitle>}%
10810 \special{!pdffinfo s=<\@pdfsubject>}%
10811 \special{!pdffinfo c=<\@pdfcreator>}%
10812 \ifx\@pdfproducer\relax
10813 \else
10814 \special{!pdffinfo r=<\@pdfproducer>}%
10815 \fi
10816 \special{!pdffinfo k=<\@pdfkeywords>}%
10817 \Hy@DisableOption{pdfauthor}%
10818 \Hy@DisableOption{pdftitle}%
10819 \Hy@DisableOption{pdfsubject}%
10820 \Hy@DisableOption{pdfcreator}%
10821 \Hy@DisableOption{addtopdfcreator}%
10822 \Hy@DisableOption{pdfcreationdate}%
10823 \Hy@DisableOption{pdfcreationdate}%
10824 \Hy@DisableOption{pdfmoddate}%
10825 \Hy@DisableOption{pdfproducer}%
10826 \Hy@DisableOption{pdfkeywords}%
10827 \Hy@DisableOption{pdftrapped}%
10828 \Hy@DisableOption{pdffinfo}%
10829 }
10830 </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.

```
10831 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%  
10832 <packageEnd>\providecommand*\Hy@DistillerDestFix{}  
10833 <*pdfmark | dviwindo>  
10834 \def\Hy@DistillerDestFix{%  
10835   \begingroup  
10836     \let\x\literalps@out
```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```
10837   \ifnum \@ifundefined{OpMode}{0}{%  
10838     \@ifundefined{gexmode}{0}{%  
10839       \ifnum\gexmode>0 \OpMode\else 0\fi  
10840     }>1 %  
10841   \def\x##1{%  
10842     \immediate\special{!=##1}}%  
10843   }%  
10844   \fi  
10845   \x{%  
10846     /product where{%  
10847       pop %  
10848       product(Distiller)search{%  
10849         pop pop pop %  
10850         version(.)search{%  
10851           exch pop exch pop%  
10852           (3011)eq{%  
10853             gsave %  
10854             newpath 0 0 moveto closepath clip%  
10855             /Courier findfont 10 scalefont setfont %  
10856             72 72 moveto(.)show %  
10857             grestore%  
10858             }if%  
10859           }{pop}ifelse%  
10860           }{pop}ifelse%  
10861           }if%  
10862         }%  
10863       \endgroup  
10864     }  
10865 </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

```

10866 (*pdfmark)
10867 \Hy@breaklinks@unsupported
10868 \def\HyPat@ObjRef{%
10869 \[~{}]+\}%
10870 }
10871 \Hy@WrapperDef\hyper@anchor#1{%
10872 \Hy@SaveLastskip
10873 \Hy@VerboseAnchor{#1}%
10874 \begingroup
10875 \pdfmark[\anchor@spot]{%
10876 pdfmark=/DEST,%
10877 linktype=anchor,%
10878 View=/\@pdfview \@pdfviewparams,%
10879 DestAnchor={#1}%
10880 }%
10881 \endgroup
10882 \Hy@RestoreLastskip
10883 }
10884 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
10885 \Hy@WrapperDef\hyper@anchorstart#1{%
10886 \Hy@SaveLastskip
10887 \Hy@VerboseAnchor{#1}%
10888 \literalps@out{H.S}%
10889 \Hy@AllowHyphens
10890 \xdef\hyper@currentanchor{#1}%
10891 \Hy@activeanchortrue
10892 }
10893 \def\hyper@anchorend{%
10894 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10895 \pdfmark{%
10896 pdfmark=/DEST,%
10897 linktype=anchor,%
10898 View=/\@pdfview \@pdfviewparams,%
10899 DestAnchor=\hyper@currentanchor,%
10900 }%
10901 \Hy@activeanchorfalse
10902 \Hy@RestoreLastskip
10903 }
10904 \def\hyper@linkstart#1#2{%
10905 \Hy@VerboseLinkStart{#1}{#2}%
10906 \ifHy@breaklinks
10907 \else
10908 \leavevmode

```



```

10909 \ifmmode
10910   \def\Hy@LinkMath{${}%
10911 \else
10912   \let\Hy@LinkMath\ltx@empty
10913 \fi
10914 \Hy@SaveSpaceFactor
10915 \hbox\bgroup
10916 \Hy@RestoreSpaceFactor
10917 \Hy@LinkMath
10918 \fi
10919 \expandafter\Hy@colorlink\csname @#1color\endcsname
10920 \literalps@out{H.S}%
10921 \Hy@AllowHyphens
10922 \xdef\hyper@currentanchor{#2}%
10923 \gdef\hyper@currentlinktype{#1}%
10924 }
10925 \def\hyper@linkend{%
10926 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
10927 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
10928   \let\Hy@tempcolor\relax
10929 }{%
10930   \edef\Hy@tempcolor{%
10931     \csname @\hyper@currentlinktype bordercolor\endcsname
10932   }%
10933 }%
10934 \pdfmark{%
10935   pdfmark=/ANN,%
10936   linktype=link,%
10937   Subtype=/Link,%
10938   PDFAFflags=4,%
10939   Dest=\hyper@currentanchor,%
10940   AcroHighlight=\@pdfhighlight,%
10941   Border=\@pdfborder,%
10942   BorderStyle=\@pdfborderstyle,%
10943   Color=\Hy@tempcolor,%
10944   Raw=H.B%
10945 }%
10946 \Hy@endcolorlink
10947 \ifHy@breaklinks
10948 \else
10949   \Hy@LinkMath
10950   \Hy@SaveSpaceFactor
10951   \egroup
10952   \Hy@RestoreSpaceFactor
10953 \fi
10954 }

```

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.

```

10955 \begingroup
10956 \catcode`P=12 %
10957 \catcode`T=12 %
10958 \lowercase{\endgroup

```

```

10959 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
10960 }
10961 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

10962 \def\hyper@pagetransition{%
10963 \ifx\@pdfpagetransition\relax
10964 \else
10965 \ifx\@pdfpagetransition\@empty
10966 % 1. Does an old entry have to be deleted?
10967 % 2. If 1=yes, how to delete?
10968 \else
10969 \pdfmark{%
10970 pdfmark=/PUT,%
10971 Raw={%
10972 \string{ThisPage\string}%
10973 <</Trans << /S /\@pdfpagetransition\space >> >>%
10974 }%
10975 }%
10976 \fi
10977 \fi
10978 }

```

\hyper@pageduration

```

10979 \def\hyper@pageduration{%
10980 \ifx\@pdfpageduration\relax
10981 \else
10982 \ifx\@pdfpageduration\@empty
10983 % 1. Does an old entry have to be deleted?
10984 % 2. If 1=yes, how to delete?
10985 \else
10986 \pdfmark{%
10987 pdfmark=/PUT,%
10988 Raw={%
10989 \string{ThisPage\string}%
10990 <</Dur \@pdfpageduration>>%
10991 }%
10992 }%
10993 \fi
10994 \fi
10995 }

10996 \g@addto@macro\Hy@EveryPageBoxHook{%
10997 \hyper@pagetransition
10998 \hyper@pageduration
10999 }

11000 \def\hyper@image#1#2{%
11001 \hyper@linkurl{#2}{#1}%
11002 }
11003 \def\Hy@undefinedname{UNDEFINED}
11004 \def\hyper@link#1#2#3{%
11005 \Hy@VerboseLinkStart{#1}{#2}%
11006 \ltx@ifundefined{#1bordercolor}{%
11007 \let\Hy@tempcolor\relax

```

```

11008 }{%
11009   \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11010 }%
11011 \begingroup
11012   \protected@edef\Hy@testname{#2}%
11013   \ifx\Hy@testname\@empty
11014     \Hy@Warning{%
11015       Empty destination name,\MessageBreak
11016       using '\Hy@undefinedname'%
11017     }%
11018     \let\Hy@testname\Hy@undefinedname
11019   \fi
11020   \pdfmark[#{#3}]{%
11021     Color=\Hy@tempcolor,%
11022     linktype={#1},%
11023     AcroHighlight=\@pdfhighlight,%
11024     Border=\@pdfborder,%
11025     BorderStyle=\@pdfborderstyle,%
11026     pdfmark=/ANN,%
11027     Subtype=/Link,%
11028     PDFAFlags=4,%
11029     Dest=\Hy@testname
11030   }%
11031 \endgroup
11032 }
11033 \newtoks\pdf@docset
11034 \def\PDF@FinishDoc{%
11035   \Hy@UseMaketitleInfos
11036   \Hy@Info@GenerateAddons
11037   \let\Hy@temp\@empty
11038   \ifx\@pdfcreationdate\@empty
11039     \else
11040     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11041   \fi
11042   \ifx\@pdfmoddate\@empty
11043     \else
11044     \expandafter\def\expandafter\Hy@temp\expandafter{%
11045       \Hy@temp
11046       ModDate=\@pdfmoddate,%
11047     }%
11048   \fi
11049   \ifx\@pdfproducer\relax
11050     \else
11051     \expandafter\def\expandafter\Hy@temp\expandafter{%
11052       \Hy@temp
11053       Producer=\@pdfproducer,%
11054     }%
11055   \fi
11056   \expandafter
11057   \pdfmark\expandafter{%
11058     \Hy@temp
11059     pdfmark=/DOCINFO,%
11060     Title=\@pdftitle,%
11061     Subject=\@pdfsubject,%

```

```

11062   Creator=\@pdfcreator,%
11063   Author=\@pdfauthor,%
11064   Keywords=\@pdfkeywords,%
11065   Trapped=\@pdftrapped
11066 }%
11067 \ifx\HyInfo@Addons\@empty
11068 \else
11069   \pdfmark{%
11070     pdfmark=/DOCINFO,%
11071     Raw={\HyInfo@Addons}%
11072   }%
11073 \fi
11074 \Hy@DisableOption{pdfauthor}%
11075 \Hy@DisableOption{pdftitle}%
11076 \Hy@DisableOption{pdfsubject}%
11077 \Hy@DisableOption{pdfcreator}%
11078 \Hy@DisableOption{addtopdfcreator}%
11079 \Hy@DisableOption{pdfcreationdate}%
11080 \Hy@DisableOption{pdfcreationdate}%
11081 \Hy@DisableOption{pdfmoddate}%
11082 \Hy@DisableOption{pdfproducer}%
11083 \Hy@DisableOption{pdfkeywords}%
11084 \Hy@DisableOption{pdftrapped}%
11085 \Hy@DisableOption{pdfinfo}%
11086 }
11087 \def\PDF@SetupDoc{%
11088   \def\Hy@temp{}%
11089   \ifx\@pdfstartpage\@empty
11090   \else
11091     \ifx\@pdfstartview\@empty
11092     \else
11093       \edef\Hy@temp{%
11094         ,Page=\@pdfstartpage
11095         ,View=\@pdfstartview
11096       }%
11097     \fi
11098   \fi
11099   \edef\Hy@temp{%
11100     \noexpand\pdfmark{%
11101       pdfmark=/DOCVIEW,%
11102       PageMode=/\@pdfpagemode
11103     }\Hy@temp
11104   }%
11105 }%
11106 \Hy@temp
11107 \ifx\@pdfpagescrop\@empty
11108 \else
11109   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11110 \fi
11111 \edef\Hy@temp{%
11112   \ifHy@pdftoolbar\else /HideToolbar true\fi
11113   \ifHy@pdfmenubar\else /HideMenubar true\fi
11114   \ifHy@pdfwindowui\else /HideWindowUI true\fi
11115   \ifHy@pdffitwindow /FitWindow true\fi

```

```

11116 \ifHy@pdfcenterwindow /CenterWindow true\fi
11117 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11118 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11119 \Hy@UseNameKey{Direction}\@pdfdirection
11120 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11121 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11122 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11123 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11124 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11125 \Hy@UseNameKey{Duplex}\@pdfduplex
11126 \ifx\@pdfpicktraybypdfsize\@empty
11127 \else
11128 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11129 \fi
11130 \ifx\@pdfprintpagerange\@empty
11131 \else
11132 /PrintPageRange[\@pdfprintpagerange]%
11133 \fi
11134 \ifx\@pdfnumcopies\@empty
11135 \else
11136 /NumCopies \@pdfnumcopies
11137 \fi
11138 }%
11139 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11140 \pdfmark{%
11141 pdfmark=/PUT,%
11142 Raw={%
11143 \string{Catalog\string}<<%
11144 \ifx\Hy@temp\@empty
11145 \else
11146 /ViewerPreferences<<\Hy@temp>>%
11147 \fi
11148 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11149 \ifx\@pdflang\relax
11150 \else
11151 /Lang(\@pdflang)%
11152 \fi
11153 \ifx\@baseurl\@empty
11154 \else
11155 /URI<</Base(\Hy@pstringB)>>%
11156 \fi
11157 >>%
11158 }%
11159 }%
11160 }
11161 </pdfmark>
11162 (*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.

```

11163 \newif\ifHy@pdfmarkerror
11164 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
11165 \def\pdfmark@[#1]#2{%
11166   \Hy@pdfmarkerrorfalse
11167   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11168   \@processme
11169   \let\pdf@type\relax
11170   \let\pdf@objdef\ltx@empty
11171   \kvsetkeys{PDF}{#2}%
11172   \ifHy@pdfmarkerror
11173   \else
11174     \ifx\pdf@type\relax
11175       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11176       \ifx\#1\%
11177         \else
11178           \pdf@rect{#1}%
11179           \fi
11180         \else
11181           \ifx\#1\%
11182             \literalps@out{%
11183               [%
11184                 \ifx\pdf@objdef\ltx@empty
11185                 \else
11186                   /_objdef\string{\pdf@objdef\string}%
11187                 \fi
11188                 \the\pdf@toks\space\pdf@type\space pdfmark%
11189               ]%
11190             \else
11191               \ltx@ifundefined{@\pdf@linktype color}{%
11192                 \Hy@colorlink\@linkcolor
11193               }{%
11194                 \expandafter\Hy@colorlink
11195                 \csname @\pdf@linktype color\endcsname
11196               }%
11197             \pdf@rect{#1}%
11198             \literalps@out{%
11199               [%
11200                 \ifx\pdf@objdef\ltx@empty
11201                 \else
11202                   /_objdef\string{\pdf@objdef\string}%
11203                 \fi
11204                 \the\pdf@toks\space\pdf@type\space pdfmark%
11205               ]%
11206             \Hy@endcolorlink
11207           \fi
11208         \fi
11209       \fi
11210 }

```

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}
```

```
11211 \newsavebox{\pdf@box}  
11212 \providecommand*\Hy@setouterhbox{\sbox}  
11213 \providecommand*\Hy@breaklinksunhbox{\unhbox}  
11214 \def\Hy@DEST{/DEST}  
11215 \def\pdf@rect#1{%  
11216   \begingroup  
11217   \chardef\x=1 %  
11218   \def\Hy@temp{#1}%  
11219   \ifx\Hy@temp\ltx@empty  
11220     \chardef\x=0 %  
11221   \else  
11222     \def\y{\anchor@spot}%  
11223     \ifx\Hy@temp\y  
11224       \def\y{\relax}%  
11225     \ifx\anchor@spot\y  
11226       \chardef\x=0 %  
11227     \fi  
11228     \fi  
11229     \fi  
11230 \expandafter\endgroup  
11231 \ifcase\x  
11232   \literalps@out{H.S}%  
11233   \literalps@out{H.R}%  
11234 \else  
11235   \leavevmode  
11236   \Hy@SaveSpaceFactor  
11237   \ifmmode  
11238     \def\Hy@LinkMath{$}%  
11239   \else  
11240     \let\Hy@LinkMath\ltx@empty  
11241   \fi  
11242   \ifHy@breaklinks  
11243     \Hy@setouterhbox\pdf@box{%  
11244       \Hy@RestoreSpaceFactor  
11245       \Hy@LinkMath  
11246       \Hy@AllowHyphens#1\Hy@xspace@end  
11247       \Hy@LinkMath  
11248       \Hy@SaveSpaceFactor  
11249     }%  
11250   \else  
11251     \sbox\pdf@box{%  
11252       \Hy@RestoreSpaceFactor  
11253       \Hy@LinkMath  
11254       #1\Hy@xspace@end  
11255       \Hy@LinkMath  
11256       \Hy@SaveSpaceFactor
```

```

11257 }%
11258 \fi
11259 \dimen@ht\pdf@box
11260 \ifdim\dp\pdf@box=\z@
11261 \literalps@out{H.S}%
11262 \else
11263 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11264 \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...).

```

11265 \ifHy@breaklinks
11266 \ifhmode
11267 \Hy@breaklinksunhbox\pdf@box
11268 \else
11269 \box\pdf@box
11270 \fi
11271 \else
11272 \expandafter\box\pdf@box
11273 \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

11274 \ifdim\dimen@=\z@
11275 \literalps@out{H.R}%
11276 \else
11277 \raise\dimen@\hbox{\literalps@out{H.R}}%
11278 \fi
11279 \Hy@RestoreSpaceFactor
11280 \fi
11281 \ifx\pdf@type\Hy@DEST
11282 \else
11283 \pdf@addtoksx{H.B}%
11284 \fi
11285 }

```

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.

```

11286 \newtoks\pdf@toks
11287 \newtoks\pdf@defaulttoks
11288 \pdf@defaulttoks={}%
11289 \def\pdf@addtoks#1#2{%
11290 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11291 \@processme
11292 }
11293 \def\pdf@addtoksx#1{%
11294 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11295 \@processme
11296 }
11297 \def\PDFdefaults#1{%

```



```

11298 \pdf@defaulttoks={#1}%
11299 }
This is the list of allowed keys. See the Acrobat manual for an explanation.
11300 % what is the type of pdfmark?
11301 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11302 % what is the link type?
11303 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11304 \def\pdf@linktype{link}
11305 % named object?
11306 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
11307 \let\pdf@objdef\ltx@empty
11308 % parameter is a stream of PDF
11309 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11310 % parameter is a name
11311 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11312 % parameter is a array
11313 \define@key{PDF}{Border}{%
11314 \edef\Hy@temp{#1}%
11315 \ifx\Hy@temp\@empty
11316 \else
11317 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11318 \fi
11319 }
11320 \let\Hy@BorderArrayPatch\@empty
11321 % parameter is a dictionary
11322 \define@key{PDF}{BorderStyle}{%
11323 \edef\Hy@temp{#1}%
11324 \ifx\Hy@temp\@empty
11325 \else
11326 \pdf@addtoks{<<#1>>}{BS}%
11327 \fi
11328 }
11329 % parameter is a array
11330 \define@key{PDF}{Color}{%
11331 \ifx\relax#1\relax
11332 \else
11333 \pdf@addtoks{[#1]}{Color}% hash-ok
11334 \fi
11335 }
11336 % parameter is a string
11337 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11338 % parameter is a integer
11339 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11340 % parameter is a array
11341 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11342 % parameter is a string
11343 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11344 % parameter is a string or file
11345 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11346 % parameter is a destination
11347 \define@key{PDF}{Dest}{%
11348 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11349 \ifx\Hy@pstringDest\@empty
11350 \Hy@pdfmarkerrortrue

```

```

11351 \Hy@Warning{Destination with empty name ignored}%
11352 \else
11353 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11354 \fi
11355 }
11356 \define@key{PDF}{DestAnchor}{%
11357 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11358 \ifx\Hy@pstringDest\@empty
11359 \Hy@pdfmarkerrortrue
11360 \Hy@Warning{Destination with empty name ignored}%
11361 \else
11362 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11363 \fi
11364 }
11365 % parameter is a string
11366 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11367 % parameter is a string
11368 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11369 % parameter is a int
11370 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11371 \define@key{PDF}{PDFAFlags}{%
11372 \ifHy@pdfa
11373 \pdf@addtoks{#1}{F}%
11374 \fi
11375 }
11376 % parameter is a name
11377 \define@key{PDF}{AcroHighlight}{%
11378 \begingroup
11379 \edef\x{#1}%
11380 \expandafter\endgroup\ifx\x\@empty
11381 \else
11382 \pdf@addtoks{#1}{H}%
11383 \fi
11384 }
11385 % parameter is a string
11386 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11387 % parameter is a string
11388 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
11389 % parameter is a string
11390 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11391 % parameter is a string
11392 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11393 % parameter is a Boolean
11394 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11395 % parameter is a integer or name
11396 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11397 % parameter is a name
11398 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11399 % parameter is a string
11400 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11401 % parameter is a array
11402 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11403 % parameter is a integer
11404 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}

```

```

11405 % parameter is a name
11406 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11407 % parameter is a string
11408 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
11409 % parameter is a string
11410 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11411 % parameter is a string
11412 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11413 % parameter is an array
11414 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11415 % parameter is a string
11416 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

These are the keys used in the DOCINFO section.

11417 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11418 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11419 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11420 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11421 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11422 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11423 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11424 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11425 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11426 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11427 \define@key{PDF}{Trapped}{%
11428   \edef\Hy@temp{#1}%
11429   \ifx\Hy@temp\@empty
11430     \else
11431       \pdf@addtoks{/#1}{Trapped}%
11432     \fi
11433   }
11434
11435 \pdfmarkbase)
11436 (*pdfmark)
11437 \def\Acrobatmenu#1#2{%
11438   \EdefEscapeName\Hy@temp@menu{#1}%
11439   \Hy@Acrobatmenu{#1}{#2}{%
11440     \pdfmark{#2}{%
11441       linktype=menu,%
11442       pdfmark=/ANN,%
11443       AcroHighlight=\@pdfhighlight,%
11444       Border=\@pdfborder,%
11445       BorderStyle=\@pdfborderstyle,%
11446       Color=\@menubordercolor,%
11447       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
11448       Subtype=/Link,%
11449       PDFAMFlags=4%
11450     }%
11451   }%
11452 }

And now for some useful examples:

11453 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@{}}
11454 \def\PDFNextPage@[#1]#2{%
11455   \pdfmark{#2}{%

```

```

11456   #1,%
11457   Border=\@pdfborder,%
11458   BorderStyle=\@pdfborderstyle,%
11459   Color=.2 .1 .5,%
11460   pdfmark=/ANN,%
11461   Subtype=/Link,%
11462   PDFAFlags=4,%
11463   Page=/Next%
11464 }%
11465 }
11466 \def\PDFPreviousPage{%
11467   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11468 }
11469 \def\PDFPreviousPage@[#1]#2{%
11470   \pdfmark[#{#2}]{%
11471     #1,%
11472     Border=\@pdfborder,%
11473     BorderStyle=\@pdfborderstyle,%
11474     Color=.4 .4 .1,%
11475     pdfmark=/ANN,%
11476     Subtype=/Link,%
11477     PDFAFlags=4,%
11478     Page=/Prev%
11479 }%
11480 }
11481 \def\PDFOpen#1{%
11482   \pdfmark{#1,pdfmark=/DOCVIEW}%
11483 }
This will only work if you use Distiller 2.1 or higher.
11484 \def\hyper@linkurl#1#2{%
11485   \begingroup
11486   \Hy@pstringdef\Hy@pstringURI{#2}%
11487   \hyper@chars
11488   \leavevmode
11489   \pdfmark[#{#1}]{%
11490     pdfmark=/ANN,%
11491     linktype=url,%
11492     AcroHighlight=\@pdfhighlight,%
11493     Border=\@pdfborder,%
11494     BorderStyle=\@pdfborderstyle,%
11495     Color=\@urlbordercolor,%
11496     Action={<<%
11497       /Subtype/URI%
11498       /URI(\Hy@pstringURI)%
11499       \ifHy@href@ismap
11500         /IsMap true%
11501       \fi
11502     >>},%
11503     Subtype=/Link,%
11504     PDFAFlags=4%
11505   }%
11506   \endgroup
11507 }
11508 \def\hyper@linkfile#1#2#3{%

```

```

11509 \begingroup
11510 \def\Hy@pstringF{#2}%
11511 \Hy@CleanupFile\Hy@pstringF
11512 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11513 \Hy@pstringdef\Hy@pstringD{#3}%
11514 \Hy@MakeRemoteAction
11515 \leavevmode
11516 \pdfmark[#{#1}]{%
11517 pdfmark=/ANN,%
11518 Subtype=/Link,%
11519 PDFAFlags=4,%
11520 AcroHighlight=\@pdfhighlight,%
11521 Border=\@pdfborder,%
11522 BorderStyle=\@pdfborderstyle,%
11523 linktype=file,%
11524 Color=\@filebordercolor,%
11525 Action={%
11526 <<%
11527 /S/GoToR%
11528 \Hy@SetNewWindow
11529 /F(\Hy@pstringF)%
11530 /D%
11531 \ifx\#3\%
11532 [\Hy@href@page\@pdfremotestartview]%
11533 \else
11534 (\Hy@pstringD)cvn%
11535 \fi
11536 \Hy@href@nextactionraw
11537 >>%
11538 }%
11539 }%
11540 \endgroup
11541 }
11542 \def\@hyper@launch run:#{1}\#2#3{%
11543 \begingroup
11544 \Hy@pstringdef\Hy@pstringF{#1}%
11545 \Hy@pstringdef\Hy@pstringP{#3}%
11546 \leavevmode
11547 \pdfmark[#{#2}]{%
11548 pdfmark=/ANN,%
11549 Subtype=/Link,%
11550 PDFAFlags=4,%
11551 AcroHighlight=\@pdfhighlight,%
11552 Border=\@pdfborder,%
11553 BorderStyle=\@pdfborderstyle,%
11554 linktype=run,%
11555 Color=\@runbordercolor,%
11556 Action={%
11557 <<%
11558 /S/Launch%
11559 \Hy@SetNewWindow
11560 /F(\Hy@pstringF)%
11561 \ifx\#3\%
11562 \else

```

```

11563         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11564         \fi
11565         \Hy@href@nextactionraw
11566         >>%
11567     }%
11568 }%
11569 \endgroup
11570 }
11571 </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.

```

11572 (*dvips)
11573 \providecommand*\XR@ext}{pdf}
11574 \let\Hy@raisedlink\ltx@empty
11575 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
11576 \def\headerps@out#1{\special{! #1}}%
11577 \input{pdfmark.def}%
11578 \ifx\@pdfproducer\relax
11579   \def\@pdfproducer{dvips + Distiller}%
11580 \fi
11581 \providecommand*\@pdfborder{0 0 1}
11582 \providecommand*\@pdfborderstyle{}
11583 \providecommand*\@pdfview{XYZ}
11584 \providecommand*\@pdfviewparams{ H.V}
11585 \def\Hy@BorderArrayPatch{BorderArrayPatch}

11586 \g@addto@macro\Hy@FirstPageHook{%
11587   \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.

```

11588 /DvipsToPDF{72.27 mul Resolution div} def%
11589 /PDFToDvips{72.27 div Resolution mul} def%
11590 /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.

```

11591   product (Ghostscript) search {pop pop pop revision 927 gt}%
11592   {pop false} ifelse%
11593   {%
11594     /BorderArrayPatch{} def%
11595   }%
11596   {%
11597     /BorderArrayPatch{%
11598       [exch{%
11599         dup dup type/integertype eq exch type/realttype eq or%
11600         {BPToDvips}if%
11601       }forall]%
11602     }def%
11603   } 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.

```

11604   /HyperBorder {1 PDFToDvips} def%
11605   /H.V {pdf@hoff pdf@voff null} def%
11606   /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

```

11607   /H.S {%
11608     currentpoint %
11609     HyperBorder add /pdf@lly exch def %
11610     dup DvipsToPDF 72 add /pdf@hoff exch def %
11611     HyperBorder sub /pdf@llx exch def%
11612   } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```

11613   /H.L {%
11614     2 sub dup%
11615     /HyperBasePt exch def %
11616     PDFToDvips /HyperBaseDvips exch def %
11617     currentpoint %
11618     HyperBaseDvips sub /pdf@ury exch def%
11619     /pdf@urx exch def%
11620   } def%
11621   /H.A {%
11622     H.L %
11623   % | /pdf@voff| = the distance from the top of the page to a point

```

```

11624 % |\baselineskip| above the current point in PDF coordinates
11625     currentpoint exch pop %
11626     vsize 72 sub exch DvipsToPDF %
11627     HyperBasePt sub % baseline skip
11628     sub /pdf@voff exch def%
11629 } def%
11630 /H.R {%
11631     currentpoint %
11632     HyperBorder sub /pdf@ury exch def %
11633     HyperBorder add /pdf@urx exch def %
11634 % |/pdf@voff| = the distance from the top of the page to the current point, in
11635 % PDF coordinates
11636     currentpoint exch pop vsize 72 sub %
11637     exch DvipsToPDF sub /pdf@voff exch def%
11638 } def%
11639 }%
11640 }
11641 \AtBeginShipoutFirst{%
11642     \ifHy@setpagesize
11643     \begingroup
11644     \ifnum\mag=\@m
11645     \ifdim\stockwidth>\z@
11646     \ifdim\stockheight>\z@
11647     \special{papersize=\the\stockwidth,\the\stockheight}%
11648     \else
11649     \ifdim\paperwidth>\z@
11650     \ifdim\paperheight>\z@
11651     \special{papersize=\the\paperwidth,\the\paperheight}%
11652     \fi
11653     \fi
11654     \fi
11655     \else
11656     \ifdim\stockwidth=\z@
11657     \ifdim\paperwidth>\z@
11658     \ifdim\paperheight>\z@
11659     \special{papersize=\the\paperwidth,\the\paperheight}%
11660     \fi
11661     \fi
11662     \fi
11663     \fi
11664     \fi
11665     \endgroup
11666     \fi
11667     \Hy@DisableOption{setpagesize}%
11668 }
11669 \def\setpdfinkmargin#1{%
11670     \begingroup
11671     \setlength{\dimen@}{#1}%
11672     \literalps@out{%
11673         /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
11674     }%
11675     \endgroup
11676 }

```



```
11677 </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.

```
11678 (*vtexpdfmark)
11679 \providecommand*\XR@ext}{pdf}
11680 \let\Hy@raisedlink\ltx@empty
11681 \def\literalps@out#1{\special{pS:#1}}%
11682 \def\headerps@out#1{\immediate\special{pS:#1}}%
11683 \input{pdfmark.def}%
11684 \ifx\@pdfproducer\relax
11685   \ifnum\OpMode=\@ne
11686     \def\@pdfproducer{VTeX}%
11687   \else
11688     \def\@pdfproducer{VTeX + Distiller}%
11689   \fi
11690 \fi
11691 \providecommand*\@pdfborder{0 0 1}
11692 \providecommand*\@pdfborderstyle{}
11693 \providecommand*\@pdfview{XYZ}
11694 \providecommand*\@pdfviewparams{ H.V}
11695 \g@addto@macro\Hy@FirstPageHook{%
11696   \headerps@out{%
11697     /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.

```
11698   /HyperBorder {1} def%
11699   /H.V {pdf@hoff pdf@voff null} def%
11700   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%
```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```
11701   /H.S {%
11702     currentpoint %
11703     HyperBorder sub%
11704     /pdf@lly exch def %
11705     dup 72 add /pdf@hoff exch def %
11706     HyperBorder sub%
11707     /pdf@llx exch def%
11708   } def%
```

The x and y coordinates of the current point, minus the $\backslash\text{baselineskip}$: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```
11709   /H.L {%
11710     2 sub%
11711     /HyperBasePt exch def %
11712     currentpoint %
```

```

11713   HyperBasePt add HyperBorder add%
11714   /pdf@ury exch def %
11715   HyperBorder add%
11716   /pdf@urx exch def%
11717   } def%
11718   /H.A {%
11719   H.L %
11720   currentpoint exch pop %
11721   vsize 72 sub exch %
11722   HyperBasePt add add%
11723   /pdf@voff exch def%
11724   } def%
pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder
11725   /H.R {%
11726   currentpoint %
11727   HyperBorder add%
11728   /pdf@ury exch def %
11729   HyperBorder add%
11730   /pdf@urx exch def %
11731   currentpoint exch pop vsize 72 sub add%
11732   /pdf@voff exch def%
11733   } def%
11734 }%
11735 }

11736 \def\setpdfinkmargin#1{%
11737 \begingroup
11738 \setlength{\dimen@}{#1}%
11739 \literalps@out{%
11740 /HyperBorder{\strip@pt\dimen@}def%
11741 }%
11742 \endgroup
11743 }

11744 </vtexpdfmark>

```

43.11 Textures

```

11745 (*textures)
11746 \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.

```

11747 \begingroup
11748 \obeylines %
11749 \gdef\Hy@ps@CR{\noexpand
11750 }%
11751 \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`.

```
11752 \def\literalps@out#1{%
11753   \special{postscript 0 0 transform}%
11754   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11755 }%
11756 %
```

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.

```
11757 \def\headerps@out#1{%
11758   \special{%
11759     prepostscript TeXdict begin\Hy@ps@CR
11760     #1\Hy@ps@CR
11761     end%
11762   }%
11763 }%
11764 %
```

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.

```
11765 \g@addto@macro\Hy@FirstPageHook{%
11766   \headerps@out{%
11767     /betterpdfmark {%
11768       systemdict begin %
11769       dup /BP eq%
11770       {cleartomark gsave nulldevice []}%
11771       {dup /EP eq%
11772        {cleartomark cleartomark grestore}}%
11773       {cleartomark}%
11774       ifelse%
11775     }ifelse %
11776     end%
11777   }def\Hy@ps@CR
11778   ___pdfmark___ not{/pdfmark /betterpdfmark load def}-if%
11779 }% end of \headerps@out
11780 }% end of \AtBeginShipoutFirst
11781 %
11782 \input{pdfmark.def}%
11783 %
11784 \ifx\@pdfproducer\relax
11785   \def\@pdfproducer{Textures + Distiller}%
11786 \fi
```

```

11787 \providecommand*\@pdfborder{0 0 1}
11788 \providecommand*\@pdfborderstyle{}
11789 \providecommand*\@pdfview{XYZ}
11790 \providecommand*\@pdfviewparams{ H.V}
11791 %

```

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 .

```

11792 \Hy@AtBeginDocument{%
11793   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

11794   /vsize {\Hy@pageheight} def%
11795   /DvipsToPDF {} def%
11796   /PDFToDvips {} def%
11797   /BPToDvips {} def%
11798   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11799   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
11800   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11801   /H.S {%
11802     currentpoint %
11803     HyperBorder add /pdf@lly exch def %
11804     dup DvipsToPDF 72 add /pdf@hoff exch def %
11805     HyperBorder sub /pdf@llx exch def%
11806   } def\Hy@ps@CR
11807   /H.L {%
11808     2 sub %
11809     PDFToDvips /HyperBase exch def %
11810     currentpoint %
11811     HyperBase sub /pdf@ury exch def%
11812     /pdf@urx exch def%
11813   } def\Hy@ps@CR
11814   /H.A {%
11815     H.L %
11816     currentpoint exch pop %
11817     vsize 72 sub exch DvipsToPDF %
11818     HyperBase sub % baseline skip
11819     sub /pdf@voff exch def%
11820   } def\Hy@ps@CR
11821   /H.R {%
11822     currentpoint %
11823     HyperBorder sub /pdf@ury exch def %
11824     HyperBorder add /pdf@urx exch def %
11825     currentpoint exch pop vsize 72 sub %
11826     exch DvipsToPDF sub /pdf@voff exch def%
11827   } def\Hy@ps@CR
11828 }%
11829 }

11830 \def\setpdfinkmargin#1{%
11831   \begingroup

```

```

11832 \setlength{\dimen@}{#1}%
11833 \literalps@out{%
11834   /HyperBorder{\stripOpt\dimen@\space PDFToDvips}def%
11835 }%
11836 \endgroup
11837 }

11838 \Hy@AtBeginDocument{%
11839 \ifHy@colorlinks
11840   \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11841 \fi
11842 }

```

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.

```

11843 \expandafter\let\expandafter\keepPDF@SetupDoc
11844 \csname PDF@SetupDoc\endcsname
11845 \def\PDF@SetupDoc{%
11846   \ifx\@baseurl\@empty
11847   \else
11848     \special{html:<base href="\@baseurl">}%
11849   \fi
11850   \keepPDF@SetupDoc
11851 }

11852 \Hy@WrapperDef\hyper@anchor#1{%
11853   \Hy@SaveLastskip
11854   \Hy@VerboseAnchor{#1}%
11855   \begingroup
11856     \let\protect=\string
11857     \special{html:<a name=%
11858       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11859   \endgroup
11860   \Hy@activeanchortrue
11861   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11862   \special{html:</a>}%
11863   \Hy@activeanchorfalse
11864   \Hy@RestoreLastskip
11865 }

11866 \Hy@WrapperDef\hyper@anchorstart#1{%
11867   \Hy@SaveLastskip
11868   \Hy@VerboseAnchor{#1}%
11869   \begingroup
11870     \hyper@chars
11871     \special{html:<a name=%
11872       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11873   \endgroup
11874   \Hy@activeanchortrue
11875 }

11876 \def\hyper@anchorend{%
11877   \special{html:</a>}%
11878   \Hy@activeanchorfalse
11879   \Hy@RestoreLastskip
11880 }

11881 \def\@urltype{url}

```

```

11882 \def\hyper@linkstart#1#2{%
11883   \Hy@VerboseLinkStart{#1}{#2}%
11884   \expandafter\Hy@colorlink\csname @#1color\endcsname
11885   \def\Hy@tempa{#1}%
11886   \ifx\Hy@tempa\urltype
11887     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11888   \else
11889     \begingroup
11890       \hyper@chars
11891       \special{%
11892         html:<a href=%
11893           \hyper@quote#\Hy@HyperDestNameFilter{#2}\hyper@quote>%
11894       }%
11895     \endgroup
11896   \fi
11897 }
11898 \def\hyper@linkend{%
11899   \special{html:</a>}%
11900   \Hy@endcolorlink
11901 }
11902 \def\hyper@linkfile#1#2#3{%
11903   \hyper@linkurl{#1}{%
11904     \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
11905   }%
11906 }
11907 \def\hyper@linkurl#1#2{%
11908   \leavevmode
11909   \ifHy@raiselinks
11910     \Hy@SaveSpaceFactor
11911     \Hy@SaveSavedSpaceFactor
11912     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11913     \Hy@RestoreSavedSpaceFactor
11914     \@linkdim\dp\@tempboxa
11915     \lower\@linkdim\hbox{%
11916       \hyper@chars
11917       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11918     }%
11919     \Hy@colorlink\@urlcolor
11920     \Hy@RestoreSpaceFactor
11921     #1\Hy@xspace@end
11922     \Hy@SaveSpaceFactor
11923     \@linkdim\ht\@tempboxa
11924     \advance\@linkdim by -6.5\p@
11925     \raise\@linkdim\hbox{\special{html:</a>}}%
11926     \Hy@endcolorlink
11927     \Hy@RestoreSpaceFactor
11928   \else
11929     \begingroup
11930     \hyper@chars
11931     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11932     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
11933     \special{html:</a>}%
11934     \Hy@endcolorlink
11935   \endgroup

```

```

11936 \fi
11937 }
Very poor implementation of \hyper@link without considering #1.
11938 \def\hyper@link#1#2#3{%
11939 \Hy@VerboseLinkStart{#1}{#2}%
11940 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
11941 }
11942 \def\hyper@image#1#2{%
11943 \begingroup
11944 \hyper@chars
11945 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
11946 \endgroup
11947 }
11948 </textures>

```

43.12 dvipsone

```

11949 % \subsection{dvipsone driver}
11950 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
11951 % |\special| commands.
11952 (*dvipsone)
11953 \providecommand*\XR@ext}{pdf}
11954 \let\Hy@raisedlink\ltx@empty
11955 \providecommand*\@pdfborder{0 0 1}
11956 \providecommand*\@pdfborderstyle{}
11957 \def\literalps@out#1{\special{ps:#1}}%
11958 \def\headerps@out#1{\special{headertext=#1}}%
11959 \input{pdfmark.def}%
11960 \HyInfo@AddonUnsupportedtrue
11961 \def\PDF@FinishDoc{%
11962 \Hy@UseMaketitleInfos
11963 \HyInfo@TrappedUnsupported
11964 \special{PDF: Keywords \@pdfkeywords}%
11965 \special{PDF: Title \@pdftitle}%
11966 \special{PDF: Creator \@pdfcreator}%
11967 \ifx\@pdfcreationdate\@empty
11968 \else
11969 \special{PDF: CreationDate \@pdfcreationdate}%
11970 \fi
11971 \ifx\@pdfmoddate\@empty
11972 \else
11973 \special{PDF: ModDate \@pdfmoddate}%
11974 \fi
11975 \special{PDF: Author \@pdfauthor}%
11976 \ifx\@pdfproducer\relax
11977 \else
11978 \special{PDF: Producer \@pdfproducer}%
11979 \fi
11980 \special{PDF: Subject \@pdfsubject}%
11981 \Hy@DisableOption{pdfauthor}%
11982 \Hy@DisableOption{pdftitle}%
11983 \Hy@DisableOption{pdfsubject}%
11984 \Hy@DisableOption{pdfcreator}%

```

```

11985 \Hy@DisableOption{addtopdfcreator}%
11986 \Hy@DisableOption{pdfcreationdate}%
11987 \Hy@DisableOption{pdfcreationdate}%
11988 \Hy@DisableOption{pdfmoddate}%
11989 \Hy@DisableOption{pdfproducer}%
11990 \Hy@DisableOption{pdfkeywords}%
11991 \Hy@DisableOption{pdftrapped}%
11992 \Hy@DisableOption{pdfinfo}%
11993 }
11994 \def\PDF@SetupDoc{%
11995 \def\Hy@temp{}%
11996 \ifx\@pdfstartpage\@empty
11997 \else
11998 \ifx\@pdfstartview\@empty
11999 \else
12000 \edef\Hy@temp{%
12001 ,Page=\@pdfstartpage
12002 ,View=\@pdfstartview
12003 }%
12004 \fi
12005 \fi
12006 \edef\Hy@temp{%
12007 \noexpand\pdfmark{%
12008 pdfmark=/DOCVIEW,%
12009 PageMode=/\@pdfpagemode
12010 \Hy@temp
12011 }%
12012 }%
12013 \Hy@temp
12014 \ifx\@pdfpagescrop\@empty
12015 \else
12016 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12017 \fi
12018 \edef\Hy@temp{%
12019 \ifHy@pdftoolbar\else /HideToolbar true\fi
12020 \ifHy@pdfmenubar\else /HideMenubar true\fi
12021 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12022 \ifHy@pdffitwindow /FitWindow true\fi
12023 \ifHy@pdfcenterwindow /CenterWindow true\fi
12024 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12025 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12026 \Hy@UseNameKey{Direction}\@pdfdirection
12027 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12028 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12029 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12030 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12031 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12032 \Hy@UseNameKey{Duplex}\@pdfduplex
12033 \ifx\@pdfpicktraybypdfsize\@empty
12034 \else
12035 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12036 \fi
12037 \ifx\@pdfprintpagerange\@empty
12038 \else

```



```

12039 /PrintPageRange{\@pdfprintpagerange}%
12040 \fi
12041 \ifx\@pdfnumcopies\@empty
12042 \else
12043 /NumCopies \@pdfnumcopies
12044 \fi
12045 }%
12046 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12047 \pdfmark{%
12048 pdfmark=/PUT,%
12049 Raw={%
12050 \string{Catalog\string}<<%
12051 \ifx\Hy@temp\@empty
12052 \else
12053 /ViewerPreferences<<\Hy@temp>>%
12054 \fi
12055 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12056 \ifx\@pdflang\relax
12057 \else
12058 /Lang(\@pdflang)%
12059 \fi
12060 \ifx\@baseurl\@empty
12061 \else
12062 /URI<</Base(\Hy@pstringB)>>%
12063 \fi
12064 >>%
12065 }%
12066 }%
12067 }
12068 \providecommand*\@pdfview{XYZ}
12069 \providecommand*\@pdfviewparams{ %
12070 gsave revscl currentpoint grestore %
12071 72 add exch pop null exch null%
12072 }
12073 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx` `pdf@lly` `pdf@urx` `pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff` `pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The `Rect` pair are called at the LL and UR corners of a box known to \TeX .

```

12074 \g@addto@macro\Hy@FirstPageHook{%
12075 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

12076 /DvipsToPDF { 65781 div } def%
12077 /PDFToDvips { 65781 mul } def%
12078 /BPToDvips{65781 mul}def%
12079 /HyperBorder { 1 PDFToDvips } def%
12080 /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.

```

12081 /BorderArrayPatch{%

```

```

12082 [exch{%
12083   dup dup type/integertype eq exch type/realttype eq or%
12084   {BPToDvips}if%
12085   }forall]%
12086 }def%
12087 /H.S {%
12088   currentpoint %
12089   HyperBorder add /pdf@lly exch def %
12090   dup DvipsToPDF 72 add /pdf@hoff exch def %
12091   HyperBorder sub /pdf@llx exch def%
12092 } def%
12093 /H.L {%
12094   2 sub %
12095   PDFToDvips /HyperBase exch def %
12096   currentpoint %
12097   HyperBase sub /pdf@ury exch def%
12098   /pdf@urx exch def%
12099 } def%
12100 /H.A {%
12101   H.L %
12102   currentpoint exch pop %
12103   HyperBase sub % baseline skip
12104   DvipsToPDF /pdf@voff exch def%
12105 } def%
12106 /H.R {%
12107   currentpoint %
12108   HyperBorder sub /pdf@ury exch def %
12109   HyperBorder add /pdf@urx exch def %
12110   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12111 } def%
12112 }%
12113 }
12114 \def\setpdfinkmargin#1{%
12115   \begingroup
12116   \setlength{\dimen@}{#1}%
12117   \literalps@out{%
12118     /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12119   }%
12120 \endgroup
12121 }
12122 </dvipsone>

```

43.13 TeX4ht

```

12123 (*tex4ht)
12124 \providecommand*\XR@ext}{html}
12125 \let\Hy@raisedlink\ltx@empty
12126 \@ifpackageloaded{tex4ht}{%
12127   \Hy@InfoNoLine{tex4ht is already loaded}%
12128 }{%
12129   \RequirePackage[hhtex4ht]{tex4ht}%
12130 }
12131 \hyperlinkfileprefix{}
12132 \let\PDF@FinishDoc\ltx@empty

```

```

12133 \def\PDF@SetupDoc{%
12134   \ifx\@baseurl\@empty
12135   \else
12136     \special{t4ht=<base href="\@baseurl">}%
12137   \fi
12138 }
12139 \Hy@WrapperDef\hyper@anchor#1{%
12140   \Hy@SaveLastskip
12141   \Hy@VerboseAnchor{#1}%
12142   \begingroup
12143     \let\protect=\string
12144     \special{t4ht=<a name=%
12145       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12146   \endgroup
12147   \Hy@activeanchortrue
12148   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12149   \special{t4ht=</a>}%
12150   \Hy@activeanchorfalse
12151   \Hy@RestoreLastskip
12152 }
12153 \Hy@WrapperDef\hyper@anchorstart#1{%
12154   \Hy@SaveLastskip
12155   \Hy@VerboseAnchor{#1}%
12156   \begingroup
12157     \hyper@chars\special{t4ht=<a name=%
12158       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12159   \endgroup
12160   \Hy@activeanchortrue
12161 }
12162 \def\hyper@anchorend{%
12163   \special{t4ht=</a>}%
12164   \Hy@activeanchorfalse
12165   \Hy@RestoreLastskip
12166 }
12167 \def\@urltype{url}
12168 \def\hyper@linkstart#1#2{%
12169   \Hy@VerboseLinkStart{#1}{#2}%
12170   \expandafter\Hy@colorlink\csname @#1color\endcsname
12171   \def\Hy@tempa{#1}%
12172   \ifx\Hy@tempa\@urltype
12173     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12174   \else
12175     \begingroup
12176       \hyper@chars
12177       \special{t4ht=<a href=%
12178         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12179     \endgroup
12180   \fi
12181 }
12182 \def\hyper@linkend{%
12183   \special{t4ht=</a>}%
12184   \Hy@endcolorlink
12185 }
12186 \def\hyper@linkfile#1#2#3{%

```

```

12187 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
12188 }
12189 \def\hyper@linkurl#1#2{%
12190 \leavevmode
12191 \ifHy@raiselinks
12192 \Hy@SaveSpaceFactor
12193 \Hy@SaveSavedSpaceFactor
12194 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12195 \Hy@RestoreSavedSpaceFactor
12196 \@linkdim\dp\@tempboxa
12197 \lower\@linkdim\hbox{%
12198 \begingroup
12199 \hyper@chars
12200 \special{%
12201 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12202 }%
12203 \endgroup
12204 }%
12205 \Hy@colorlink\@urlcolor
12206 \Hy@RestoreSpaceFactor
12207 #1\Hy@xspace@end
12208 \Hy@SaveSpaceFactor
12209 \Hy@endcolorlink
12210 \@linkdim\ht\@tempboxa
12211 \advance\@linkdim by -6.5\p@
12212 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12213 \Hy@RestoreSpaceFactor
12214 \else
12215 \begingroup
12216 \hyper@chars
12217 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12218 \Hy@colorlink\@urlcolor
12219 #1\Hy@xspace@end
12220 \Hy@endcolorlink
12221 \special{t4ht=</a>}%
12222 \endgroup
12223 \fi
12224 }

Poor implementation of \hyper@link without considering #1.
12225 \def\hyper@link#1#2#3{%
12226 \Hy@VerboseLinkStart{#1}{#2}%
12227 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
12228 }
12229 \def\hyper@image#1#2{%
12230 \begingroup
12231 \hyper@chars
12232 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12233 \endgroup
12234 }
12235 \let\autoref\ref
12236 \ifx \rEFLiNK \UnDef
12237 \def\rEFLiNK #1#2{#2}%
12238 \fi
12239 \let\backref\ltx@gobble

```

```

Fix for tex4ht.
12240 \AtBeginDocument{%
12241   \expandafter
12242   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12243   \expandafter\def\csname Make:Label\endcsname#1#2{%
12244     \ifhmode
12245       \Hy@SaveSpaceFactor
12246     \else
12247       \global\Hy@SavedSpaceFactor=1000 %
12248     \fi
12249     \Hy@OrgMakeLabel{#1}{%
12250       \Hy@RestoreSpaceFactor
12251       #2\Hy@xspace@end%
12252     \Hy@SaveSpaceFactor
12253   }%
12254   \Hy@RestoreSpaceFactor
12255 }%
12256 }
12257 </tex4ht>
12258 <#*tex4htcfg>
12259 \IfFileExists{\jobname.cfg}{\endinput}{-}
12260 \Preamble{html}
12261   \begin{document}%
12262 \EndPreamble
12263 \def\TeX{TeX}
12264 \def\OMEGA{Omega}
12265 \def\LaTeX{LaTeX}
12266 \def\LaTeXe{LaTeX2e}
12267 \def\eTeX{e-TeX}
12268 \def\MF{Metafont}
12269 \def\MP{MetaPost}
12270 </tex4htcfg>

```

44 Driver-specific form support

44.1 pdfmarks

change 2020-06-20: added /Euro to encoding

```

12271 <#*pdfmark>
12272 \long\def\@Form[#1]{%
12273 \g@addto@macro\Hy@FirstPageHook{%
12274   \headerps@out{%
12275     [%
12276     /_objdef{pdfDocEncoding}%
12277     /type/dict%
12278     /OBJ pdfmark%
12279     [%
12280     {pdfDocEncoding}%
12281     <<%
12282     /Type/Encoding%
12283     /Differences[%
12284     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12285     /tilde %
12286     39/quotesingle %

```

12287 96/grave %
12288 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12289 /fraction/guilsingleft/guilsingright/minus/perthousand%
12290 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12291 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12292 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12293 160/Euro %
12294 164/currency %
12295 166/brokenbar %
12296 168/dieresis/copyright/ordfeminine %
12297 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12298 /twosuperior/threesuperior/acute/mu %
12299 183/periodcentered/cedilla/onesuperior/ordmasculine %
12300 188/onequarter/onehalf/threequarters %
12301 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12302 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12303 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12304 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12305 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12306 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12307 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12308 /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
12309 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12310 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12311]%
12312 >>%
12313 /PUT pdfmark%
12314 [%
12315 /_objdef{ZaDb}%
12316 /type/dict%
12317 /OBJ pdfmark%
12318 [%
12319 {ZaDb}%
12320 <<%
12321 /Type/Font%
12322 /Subtype/Type1%
12323 /Name/ZaDb%
12324 /BaseFont/ZapfDingbats%
12325 >>%
12326 /PUT pdfmark%
12327 [%
12328 /_objdef{Helv}%
12329 /type/dict%
12330 /OBJ pdfmark%
12331 [%
12332 {Helv}%
12333 <<%
12334 /Type/Font%
12335 /Subtype/Type1%
12336 /Name/Helv%
12337 /BaseFont/Helvetica%
12338 /Encoding{pdfDocEncoding}%
12339 >>%
12340 /PUT pdfmark%

12341 [%
12342 /_objdef{aform}%
12343 /type/dict%
12344 /OBJ pdfmark%
12345 [%
12346 /_objdef{afields}%
12347 /type/array%
12348 /OBJ pdfmark%
12349 [%
12350 /_objdef{corder}%
12351 /type/array%
12352 /OBJ pdfmark%
12353 {%
12354 [%
12355 /BBox[0 0 100 100]%
12356 /_objdef{Check}%
12357 /BP pdfmark %
12358 1 0 0 setrgbcolor%
12359 /ZapfDingbats 80 selectfont %
12360 20 20 moveto%
12361 (4)show%
12362 [/EP pdfmark%
12363 [%
12364 /BBox[0 0 100 100]%
12365 /_objdef{Cross}%
12366 /BP pdfmark %
12367 1 0 0 setrgbcolor%
12368 /ZapfDingbats 80 selectfont %
12369 20 20 moveto%
12370 (8)show%
12371 [/EP pdfmark%
12372 [%
12373 /BBox[0 0 250 100]%
12374 /_objdef{Submit}%
12375 /BP pdfmark %
12376 0.6 setgray %
12377 0 0 250 100 rectfill %
12378 1 setgray %
12379 2 2 moveto %
12380 2 98 lineto %
12381 248 98 lineto %
12382 246 96 lineto %
12383 4 96 lineto %
12384 4 4 lineto %
12385 fill %
12386 0.34 setgray %
12387 248 98 moveto %
12388 248 2 lineto %
12389 2 2 lineto %
12390 4 4 lineto %
12391 246 4 lineto %
12392 246 96 lineto %
12393 fill%
12394 /Helvetica 76 selectfont %

```

12395 0 setgray %
12396 8 22.5 moveto%
12397 (Submit)show%
12398 [/EP pdfmark%
12399 [%
12400 /BBox[0 0 250 100]%
12401 /_objdef{SubmitP}%
12402 /BP pdfmark %
12403 0.6 setgray %
12404 0 0 250 100 rectfill %
12405 0.34 setgray %
12406 2 2 moveto %
12407 2 98 lineto %
12408 248 98 lineto %
12409 246 96 lineto %
12410 4 96 lineto %
12411 4 4 lineto %
12412 fill %
12413 1 setgray %
12414 248 98 moveto %
12415 248 2 lineto %
12416 2 2 lineto %
12417 4 4 lineto %
12418 246 4 lineto %
12419 246 96 lineto %
12420 fill%
12421 /Helvetica 76 selectfont %
12422 0 setgray %
12423 10 20.5 moveto%
12424 (Submit)show%
12425 [/EP pdfmark%
12426 } ?pdfmark%
12427 [%
12428 {aform}%
12429 <<%
12430 /Fields{afields}%
12431 /DR<<%
12432 /Font<<%
12433 /ZaDb{ZaDb}%
12434 /Helv{Helv}%
12435 >>%
12436 >>%
12437 /DA(/Helv 10 Tf 0 g)%
12438 /CO{corder}%
12439 \ifHy@pdfa
12440 \else
12441 \ifHyField@NeedAppearances
12442 /NeedAppearances true%
12443 \fi
12444 \fi
12445 >>%
12446 /PUT pdfmark%
12447 [%
12448 {Catalog}%

```



```

12449 <<%
12450   /AcroForm{aform}%
12451 >>%
12452 /PUT pdfmark%
12453 }}%
12454 \kvsetkeys{Form}{#1}%
12455 }
12456 \let\@endForm\ltx@empty
12457 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12458   \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12459 }

12460 \newcount\HyField@AnnotCount
12461 \HyField@AnnotCount=\z@
12462 \def\HyField@AdvanceAnnotCount{%
12463   \global\advance\HyField@AnnotCount\@ne
12464 }
12465 \def\HyField@TheAnnotCount{%
12466   \the\HyField@AnnotCount
12467 }

12468 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
12469 \def\HyField@AddToFields#1{%
12470   \pdfmark{%
12471     pdfmark=/APPEND,%
12472     Raw={%
12473       \string{afields\string}%
12474       \string{#1\HyField@TheAnnotCount\string}%
12475     }%
12476   }%
12477   \ifx\Fld@calculate@code\ltx@empty
12478   \else
12479     \pdfmark{%
12480       pdfmark=/APPEND,%
12481       Raw={%
12482         \string{corder\string}%
12483         \string{#1\HyField@TheAnnotCount\string}%
12484       }%
12485     }%
12486   \fi
12487 }

12488 \def\@TextField[#1]#2{% parameters, label
12489   \def\Fld@name{#2}%
12490   \let\Fld@default\ltx@empty
12491   \let\Fld@value\@empty
12492   \def\Fld@width{\DefaultWidthofText}%
12493   \def\Fld@height{%
12494     \ifFld@multiline
12495       \DefaultHeightofTextMultiline
12496     \else
12497       \DefaultHeightofText
12498     \fi
12499   }%
12500   \begingroup
12501     \expandafter\HyField@SetKeys\expandafter{%

```

```

12502     \DefaultOptionsofText,#1%
12503 }%
12504 \HyField@FlagsText
12505 \ifFld@hidden\def\Fld@width{1sp}\fi
12506 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12507 \HyField@AdvanceAnnotCount
12508 \LayoutTextField{#2}{%
12509     \leavevmode
12510     \Hy@escapeform\PDFForm@Text
12511     \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
12512         pdfmark=/ANN,%
12513         objdef=text\HyField@TheAnnotCount,%
12514         Raw={\PDFForm@Text}%
12515     }%
12516 }%
12517 \HyField@AddToFields{text}%
12518 \endgroup
12519 }
12520 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12521     \def\Fld@name{#2}%
12522     \let\Fld@default\relax
12523     \let\Fld@value\relax
12524     \def\Fld@width{\DefaultWidthofChoiceMenu}%
12525     \def\Fld@height{\DefaultHeightofChoiceMenu}%
12526     \begingroup
12527     \Fld@menulength=0 %
12528     \@tempdima\z@
12529     \@for\@curropt:=#3\do{%
12530         \expandafter\Fld@checkequals\@curropt==\%
12531         \Hy@StepCount\Fld@menulength
12532         \settowidth{\@tempdimb}{\@currDisplay}%
12533         \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12534     }%
12535     \advance\@tempdima by 15\p@
12536     \begingroup
12537     \HyField@SetKeys{#1}%
12538     \edef\x{\endgroup
12539     \noexpand\expandafter
12540     \noexpand\HyField@SetKeys
12541     \noexpand\expandafter{%
12542     \expandafter\noexpand\cname DefaultOptionsof%
12543     \ifFld@radio
12544         Radio%
12545     \else
12546         \ifFld@combo
12547             \ifFld@popdown
12548                 PopdownBox%
12549             \else
12550                 ComboBox%
12551             \fi
12552         \else
12553             ListBox%
12554         \fi
12555     \fi

```

```

12556     \endcsname
12557   }%
12558 } \x
12559 \HyField@SetKeys{#1}%
12560 \ifFld@hidden\def\Fld@width{1sp}\fi
12561 \ifx\Fld@value\relax
12562   \let\Fld@value\Fld@default
12563 \fi
12564 \LayoutChoiceField{#2}{%
12565   \ifFld@radio
12566     \HyField@FlagsRadioButton
12567     \@@Radio{#3}%
12568   \else
12569     \begingroup
12570     \HyField@FlagsChoice
12571     \ifdim\Fld@width<\@tempdima
12572       \ifdim\@tempdima<1cm\@tempdima1cm\fi
12573       \edef\Fld@width{\the\@tempdima}%
12574     \fi
12575     \ifFld@combo
12576     \else
12577       \@tempdima=\the\Fld@menulength\Fld@charsize
12578       \advance\@tempdima by \Fld@borderwidth bp %
12579       \advance\@tempdima by \Fld@borderwidth bp %
12580       \edef\Fld@height{\the\@tempdima}%
12581     \fi
12582     \@@ListBox{#3}%
12583   \endgroup
12584 \fi
12585 }%
12586 \endgroup
12587 }
12588 \def\@@Radio#1{%
12589   \Fld@listcount=0 %
12590   \EdefEscapeName\Fld@default{\Fld@default}%
12591   \@for\@curropt:=#1\do{%
12592     \expandafter\Fld@checkequals\@curropt==\%
12593     \EdefEscapeName\@currValue{\@currValue}%
12594     \Hy@StepCount\Fld@listcount
12595     \@currDisplay\space
12596     \Hy@escapeform\PDFForm@Radio
12597     \ifnum\Fld@listcount=1 %
12598       \HyField@AdvanceAnnotCount
12599     \fi
12600     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12601       pdfmark=/ANN,%
12602       objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
12603       Raw={%
12604         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12605       }%
12606     } % deliberate space between radio buttons
12607     \ifnum\Fld@listcount=1 %
12608       \HyField@AddToFields{radio}%
12609     \fi

```

```

12610 }%
12611 }
12612 \newcount\Fld@listcount
12613 \def\@@ListBox#1{%
12614 \HyField@PDFChoices{#1}%
12615 \Hy@escapeform\PDFForm@List
12616 \HyField@AdvanceAnnotCount
12617 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12618 pdfmark=/ANN,%
12619 objdef=list\HyField@TheAnnotCount,%
12620 Raw={\PDFForm@List}%
12621 }%
12622 \HyField@AddToFields{list}%
12623 }
12624 \def\@PushButton[#1]#2{% parameters, label
12625 \def\Fld@name{#2}%
12626 \begingroup
12627 \expandafter\HyField@SetKeys\expandafter{%
12628 \DefaultOptionsofPushButton,#1%
12629 }%
12630 \ifHy@pdfa
12631 \Hy@Error{%
12632 PDF/A: Push button with JavaScript is prohibited%
12633 } \@ehc
12634 \LayoutPushButtonField{%
12635 \leavevmode
12636 \MakeButtonField{#2}%
12637 }%
12638 \else
12639 \HyField@FlagsPushButton
12640 \ifFld@hidden\def\Fld@width{1sp}\fi
12641 \HyField@AdvanceAnnotCount
12642 \LayoutPushButtonField{%
12643 \leavevmode
12644 \Hy@escapeform\PDFForm@Push
12645 \pdfmark[\MakeButtonField{#2}]{%
12646 pdfmark=/ANN,%
12647 objdef=push\HyField@TheAnnotCount,%
12648 Raw={\PDFForm@Push}%
12649 }%
12650 }%
12651 \HyField@AddToFields{push}%
12652 \fi
12653 \endgroup
12654 }
12655 \def\@Submit[#1]#2{%
12656 \def\Fld@width{\DefaultWidthofSubmit}%
12657 \def\Fld@height{\DefaultHeightofSubmit}%
12658 \begingroup
12659 \expandafter\HyField@SetKeys\expandafter{%
12660 \DefaultOptionsofSubmit,#1%
12661 }%
12662 \HyField@FlagsPushButton
12663 \HyField@FlagsSubmit

```

```

12664 \ifFld@hidden\def\Fld@width{1sp}\fi
12665 \Hy@escapeform\PDFForm@Submit
12666 \HyField@AdvanceAnnotCount
12667 \pdfmark[\MakeButtonField{#2}]{%
12668 pdfmark=/ANN,%
12669 objdef=submit\HyField@TheAnnotCount,%
12670 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
12671 }%
12672 \HyField@AddToFields{submit}%
12673 \endgroup
12674 }
12675 \def\@Reset[#1]#2{%
12676 \def\Fld@width{\DefaultWidthofReset}%
12677 \def\Fld@height{\DefaultHeightofReset}%
12678 \begingroup
12679 \expandafter\HyField@SetKeys\expandafter{%
12680 \DefaultOptionsofReset,#1%
12681 }%
12682 \leavevmode
12683 \ifHy@pdfa
12684 \Hy@Error{%
12685 PDF/A: Reset action is prohibited%
12686 } \@ehc
12687 \MakeButtonField{#2}%
12688 \else
12689 \HyField@FlagsPushButton
12690 \ifFld@hidden\def\Fld@width{1sp}\fi
12691 \Hy@escapeform\PDFForm@Reset
12692 \HyField@AdvanceAnnotCount
12693 \pdfmark[\MakeButtonField{#2}]{%
12694 pdfmark=/ANN,%
12695 objdef=reset\HyField@TheAnnotCount,%
12696 Raw={\PDFForm@Reset}%
12697 }%
12698 \HyField@AddToFields{reset}%
12699 \fi
12700 \endgroup
12701 }%
12702 \def\@CheckBox[#1]#2{% parameters, label
12703 \def\Fld@name{#2}%
12704 \def\Fld@default{0}%
12705 \begingroup
12706 \def\Fld@width{\DefaultWidthofCheckBox}%
12707 \def\Fld@height{\DefaultHeightofCheckBox}%
12708 \expandafter\HyField@SetKeys\expandafter{%
12709 \DefaultOptionsofCheckBox,#1%
12710 }%
12711 \HyField@FlagsCheckBox
12712 \ifFld@hidden\def\Fld@width{1sp}\fi
12713 \HyField@AdvanceAnnotCount
12714 \LayoutCheckField{#2}{%
12715 \leavevmode
12716 \Hy@escapeform\PDFForm@Check
12717 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%

```

```

12718 pdfmark=/ANN,%
12719 objdef=check\HyField@TheAnnotCount,%
12720 Raw={\PDFForm@Check}%
12721 }%
12722 }%
12723 \HyField@AddToFields{check}%
12724 \endgroup
12725 }
12726 </pdfmark>

```

44.2 HyperTeX

```

12727 (*hypertex)
12728 \def\@Form[#1]{%
12729 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12730 }
12731 \let\@endForm\ltx@empty
12732 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12733 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
12734 }
12735 \def\@TextField[#1]#2{% parameters, label
12736 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12737 }
12738 \def\@CheckBox[#1]#2{% parameters, label
12739 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12740 }
12741 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12742 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12743 }
12744 \def\@PushButton[#1]#2{% parameters, label
12745 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12746 }
12747 \def\@Reset[#1]#2{%
12748 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12749 }
12750 \def\@Submit[#1]#2{%
12751 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
12752 }
12753 </hypertex>

```

44.3 TeX4ht

```

12754 (*tex4ht)
12755 \def\@Form[#1]{%
12756 \kvsetkeys{Form}{#1}%
12757 \HCode{<form action="\Form@action" method="\Form@method">%
12758 }
12759 \def\@endForm{\HCode{</form>}}
12760 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12761 \Hy@Message{Sorry, TeX4ht does not support gauges}%
12762 }
12763 \def\@TextField[#1]#2{% parameters, label
12764 \let\Hy@reserved@a\@empty
12765 \def\Fld@name{#2}%
12766 \let\Fld@default\ltx@empty

```

```

12767 \bgroup
12768 \Field@toks={ }%
12769 \kvsetkeys{Field}{#1}%
12770 \HCode{<label for="\Fld@name">#2</label>}%
12771 \ifFld@password
12772 \@@PasswordField
12773 \else
12774 \@@TextField
12775 \fi
12776 \egroup
12777 }
12778 \def\@@PasswordField{%
12779 \HCode{%
12780 <input type="password" %
12781 id="\Fld@name" %
12782 name="\Fld@name" %
12783 \ifFld@hidden type="hidden" \fi
12784 value="\Fld@default" %
12785 \the\Field@toks
12786 >%
12787 }%
12788 }
12789 \def\@@TextField{%
12790 \ifFld@multiline
12791 \HCode{<textarea %
12792 \ifFld@readonly readonly \fi
12793 id="\Fld@name" %
12794 name="\Fld@name" %
12795 \ifFld@hidden type="hidden" \fi
12796 \the\Field@toks>%
12797 }%
12798 \Fld@default
12799 \HCode{</textarea>}%
12800 \else
12801 \HCode{<input type="text" %
12802 \ifFld@readonly readonly \fi
12803 id="\Fld@name" %
12804 name="\Fld@name" %
12805 \ifFld@hidden type="hidden" \fi
12806 value="\Fld@default" %
12807 \the\Field@toks>%
12808 }%
12809 \fi
12810 }
12811 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12812 \def\Fld@name{#2}%
12813 \let\Fld@default\tx@empty
12814 \let\Hy@reserved@a\relax
12815 \begingroup
12816 \expandafter\Fld@findlength#3\%
12817 \Field@toks={ }%
12818 \kvsetkeys{Field}{#1}%
12819 #2%
12820 \ifFld@radio

```

```

12821     \expandafter\@@Radio#3\}%
12822     \else
12823     \expandafter\@@Menu#3\}%
12824     \fi
12825 \endgroup
12826 }
12827 \def\Fld@findlength#1\{%
12828   \Fld@menulength=0 %
12829   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12830 }
12831 \def\@@Menu#1\{%
12832   \HCode{<select size="\the\Fld@menulength" %
12833     name="\Fld@name" %
12834     \the\Field@toks>%
12835   }%
12836   \@for\@curropt:=#1\do{%
12837     \expandafter\Fld@checkequals\@curropt==\}%
12838     \HCode{<option %
12839       \ifx\@curropt\Fld@default selected \fi
12840       value="\@currValue">\@currDisplay</option>%
12841     }%
12842   }%
12843   \HCode{</select>}%
12844 }
12845 \def\@@Radio#1\{%
12846   \@for\@curropt:=#1\do{%
12847     \expandafter\Fld@checkequals\@curropt==\}%
12848     \HCode{<input type="radio" %
12849       \ifx\@curropt\Fld@default checked \fi
12850       name="\Fld@name" %
12851       value="\@currValue" %
12852       \the\Field@toks>%
12853     }%
12854     \@currDisplay
12855   }%
12856 }
12857 \def\@PushButton[#1]#2{% parameters, label
12858   \def\Fld@name{#2}%
12859   \bgroup
12860   \Field@toks={ }%
12861   \kvsetkeys{Field}{#1}%
12862   \HCode{<input type="button" %
12863     name="\Fld@name" %
12864     value="#2" %
12865     \the\Field@toks>%
12866   }%
12867   \HCode{</button>}%
12868   \egroup
12869 }
12870 \def\@Submit[#1]#2{%
12871   \HCode{<button type="submit">#2</button>}%
12872 }
12873 \def\@Reset[#1]#2{%
12874   \HCode{<button type="reset">#2</button>}%

```



```

12875 }
12876 \def\@CheckBox[#1]#2{% parameters, label
12877 \let\Hy@reserved@a\@empty
12878 \def\Fld@name{#2}%
12879 \def\Fld@default{0}%
12880 \bgroup
12881 \Field@toks={ }%
12882 \kvsetkeys{Field}{#1}%
12883 \HCode{<input type="checkbox" %
12884 \ifFld@checked checked \fi
12885 \ifFld@disabled disabled \fi
12886 \ifFld@readonly readonly \fi
12887 name="\Fld@name" %
12888 \ifFld@hidden type="hidden" \fi
12889 value="\Fld@default" %
12890 \the\Fld@toks>%
12891 #2%
12892 }%
12893 \egroup
12894 }
12895 </tex4ht>

```

44.4 pdfTeX

```

12896 (*pdfTeX)
12897 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12898 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
12899 }
12900 \def\MakeFieldObject#1#2{\sbox0{#1}%
12901 \immediate\pdfxform0 %
12902 \expandafter\edef\csname #2Object\endcsname{%
12903 \the\pdfastxform\space 0 R%
12904 }%
12905 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%
12906 }%
12907 \let\HyField@afields\ltx@empty
12908 \let\HyField@cofields\ltx@empty
12909 \@ifundefined{pdfastlink}
12910 {%
12911 \let\HyField@AddToFields\relax
12912 \PackageInfo{hyperref}{%
12913 You need pdfTeX 1.40.0 for setting the /Fields entry.%
12914 \MessageBreak
12915 Adobe Reader/Acrobat accepts an empty /Field array,%
12916 \MessageBreak
12917 but other PDF viewers might complain%
12918 }}%
12919 {%
12920 \let\HyField@AuxAddToFields\ltx@gobble
12921 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
12922 \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.

```

12923 \def\HyField@ABD@AuxAddToCoFields#1#2{%

```

```

12924 \begingroup
12925 \Hy@safe@activestru e
12926 \let\ltx@secondoftwo\relax
12927 \ifx\HyField@cofields\ltx@empty
12928 \xdef\HyField@cofields{%
12929 \ltx@secondoftwo{#1}{ #2 0 R}%
12930 }%
12931 \else
12932 \let\ltx@secondoftwo\relax
12933 \def\HyField@AddCoField##1##2###3{%
12934 \ifx##1\ltx@empty
12935 \ltx@secondoftwo{#1}{ #2 0 R}%
12936 \expandafter\ltx@gobble
12937 \else
12938 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
12939 \ltx@secondoftwo{#1}{ #2 0 R}%
12940 \ltx@secondoftwo{##2}{##3}%
12941 \expandafter\expandafter\expandafter\ltx@gobble
12942 \else
12943 \ltx@secondoftwo{##2}{##3}%
12944 \fi
12945 \fi
12946 \HyField@AddCoField
12947 }%
12948 \xdef\HyField@cofields{%
12949 \expandafter\HyField@AddCoField
12950 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
12951 }%
12952 \fi
12953 \endgroup
12954 }%
12955 \Hy@AtBeginDocument{%
12956 \if@filesw
12957 \immediate\write\@mainaux{%
12958 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
12959 }%
12960 \immediate\write\@mainaux{%
12961 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
12962 }%
12963 \fi
12964 \let\HyField@AfterAuxOpen\@firstofone
12965 \def\HyField@AuxAddToFields#1{%
12966 \xdef\HyField@afields{%
12967 \ifx\HyField@afields\@empty
12968 \else
12969 \HyField@afields
12970 \space
12971 \fi
12972 #1 0 R.%
12973 }%
12974 }%
12975 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
12976 }%
12977 \def\HyField@AddToFields{%

```

```

12978 \expandafter\HyField@@AddToFields\expandafter{%
12979 \the\pdfastlink
12980 }%
12981 \ifx\Fld@calculate@code\ltx@empty
12982 \else
12983 \begingroup
12984 \Hy@safe@activetrue
12985 \edef\Hy@temp{%
12986 \endgroup
12987 \if@filesw
12988 \write\@mainaux{%
12989 \string\HyField@AuxAddToCoFields{%
12990 \Fld@calculate@sortkey
12991 }{%
12992 \the\pdfastlink
12993 }%
12994 }%
12995 \fi
12996 }%
12997 \Hy@temp
12998 \fi
12999 }%
13000 \def\HyField@@AddToFields#1{%
13001 \HyField@AfterAuxOpen{%
13002 \if@filesw
13003 \write\@mainaux{%
13004 \string\HyField@AuxAddToFields{#1}%
13005 }%
13006 \fi
13007 }%
13008 }%
13009 }
13010 \def\@Form[#1]{%
13011 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13012 \kvsetkeys{Form}{#1}%
13013 \pdf@ifdraftmode{}{%
13014 \Hy@FormObjects
13015 \ifnum\pdftexversion>13 %
13016 \pdfrefobj\OBJ@pdfdocencoding
13017 \pdfrefobj\OBJ@ZaDb
13018 \pdfrefobj\OBJ@Helv
13019 \fi
13020 \AtVeryEndDocument{%
13021 \immediate\pdfobj{%
13022 <<%
13023 /Fields[\HyField@afields]%
13024 \ifx\HyField@cofields\ltx@empty
13025 \else
13026 /CO[\romannumeral-`Q\HyField@cofields]%
13027 \fi
13028 /DR<<%
13029 /Font<<%
13030 /ZaDb \OBJ@ZaDb\space 0 R%
13031 /Helv \OBJ@Helv\space 0 R%

```

```

13032     >>%
13033     >>%
13034     /DA(/Helv 10 Tf 0 g)%
13035     \ifHy@pdfa
13036     \else
13037     \ifHyField@NeedAppearances
13038     /NeedAppearances true%
13039     \fi
13040     \fi
13041     >>%
13042     }%
13043     \edef\OBJ@acroform{\the\pdfastobj}%
13044     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13045     }%
13046 }%
13047 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13048 \begingroup
13049 \fontfamily{pzd}%
13050 \fontencoding{U}%
13051 \fontseries{m}%
13052 \fontshape{n}%
13053 \selectfont
13054 \char123 %
13055 \endgroup
13056 }{Ding}%
13057 \MakeFieldObject{%
13058 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13059 }{Submit}%
13060 \MakeFieldObject{%
13061 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13062 }{SubmitP}%
13063 }
13064 \let\@endForm\ltx@empty
13065 \let\HyAnn@AbsPageLabel\ltx@empty
13066 \let\Fld@pageobjref\ltx@empty
13067 \ltx@ifUndefined{pdfpageref}{%
13068 }{%
13069 \ltx@ifpackageloaded{zref-abspage}{%
13070 \newcount\HyAnn@Count
13071 \HyAnn@Count=\ltx@zero
13072 \def\HyAnn@AbsPageLabel{%
13073 \global\advance\HyAnn@Count by\ltx@one
13074 \zref@labelbyprops{HyAnn@the\HyAnn@Count}{abspage}%
13075 \zref@refused{HyAnn@the\HyAnn@Count}%
13076 }%
13077 \def\Fld@pageobjref{%
13078 \zref@ifrefundefined{HyAnn@the\HyAnn@Count}{%
13079 }{%
13080 \zref@ifrefcontainsprop{HyAnn@the\HyAnn@Count}{abspage}{%
13081 /P \pdfpageref
13082 \zref@extractdefault{HyAnn@the\HyAnn@Count}{abspage}{1} %
13083 \space 0 R%
13084 }{%

```

```

13085     }%
13086     }%
13087     }%
13088   }{%
13089   }%
13090 }

13091 \def\@TextField[#1]#2{% parameters, label
13092   \def\Fld@name{#2}%
13093   \let\Fld@default\tx@empty
13094   \let\Fld@value\@empty
13095   \def\Fld@width{\DefaultWidthofText}%
13096   \def\Fld@height{%
13097     \ifFld@multiline
13098       \DefaultHeightofTextMultiline
13099     \else
13100       \DefaultHeightofText
13101     \fi
13102   }%
13103   \begingroup
13104     \expandafter\HyField@SetKeys\expandafter{%
13105       \DefaultOptionsofText,#1%
13106     }%
13107     \PDFForm@Name
13108     \HyField@FlagsText
13109     \ifFld@hidden\def\Fld@width{1sp}\fi
13110     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13111     \LayoutTextField{#2}{%
13112       \leavevmode
13113       \HyAnn@AbsPageLabel
13114       \Hy@escapeform\PDFForm@Text
13115       \pdfstartlink user {\PDFForm@Text}\relax
13116       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
13117       \HyField@AddToFields
13118     }%
13119   \endgroup
13120 }

13121 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13122   \def\Fld@name{#2}%
13123   \let\Fld@default\relax
13124   \let\Fld@value\relax
13125   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13126   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13127   \begingroup
13128     \Fld@menulength=0 %
13129     \@tempdima\z@
13130     \@for\@curropt:=#3\do{%
13131       \expandafter\Fld@checkequals\@curropt==\%
13132       \Hy@StepCount\Fld@menulength
13133       \settowidth{\@tempdimb}{\@currDisplay}%
13134       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13135     }%
13136     \advance\@tempdima by 15\p@
13137   \begingroup
13138     \HyField@SetKeys{#1}%

```

```

13139 \edef\x{\endgroup
13140 \noexpand\expandafter
13141 \noexpand\HyField@SetKeys
13142 \noexpand\expandafter{%
13143 \expandafter\noexpand\cname DefaultOptionsof%
13144 \ifFld@radio
13145 Radio%
13146 \else
13147 \ifFld@combo
13148 \ifFld@popdown
13149 PopdownBox%
13150 \else
13151 ComboBox%
13152 \fi
13153 \else
13154 ListBox%
13155 \fi
13156 \fi
13157 \endcsname
13158 }%
13159 }\x
13160 \HyField@SetKeys{#1}%
13161 \PDFForm@Name
13162 \ifFld@hidden\def\Fld@width{1sp}\fi
13163 \ifx\Fld@value\relax
13164 \let\Fld@value\Fld@default
13165 \fi
13166 \LayoutChoiceField{#2}{%
13167 \ifFld@radio
13168 \HyField@FlagsRadioButton
13169 \@@Radio{#3}%
13170 \else
13171 \begingroup
13172 \HyField@FlagsChoice
13173 \ifdim\Fld@width<\@tempdima
13174 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13175 \edef\Fld@width{\the\@tempdima}%
13176 \fi
13177 \ifFld@combo
13178 \else
13179 \@tempdima=\the\Fld@menulength\Fld@charsize
13180 \advance\@tempdima by \Fld@borderwidth bp %
13181 \advance\@tempdima by \Fld@borderwidth bp %
13182 \edef\Fld@height{\the\@tempdima}%
13183 \fi
13184 \@@ListBox{#3}%
13185 \endgroup
13186 \fi
13187 }%
13188 \endgroup
13189 }
13190 \def\@@Radio#1{%
13191 \Fld@listcount=0 %
13192 \EdefEscapeName\Fld@default{\Fld@default}%

```

```

13193 \@for\@curropt:=#1\do{%
13194 \expandafter\Fld@checkequals\@curropt==\%
13195 \EdefEscapeName\@currValue{\@currValue}%
13196 \Hy@StepCount\Fld@listcount
13197 \@currDisplay\space
13198 \leavevmode
13199 \HyAnn@AbsPageLabel
13200 \Hy@escapeform\PDFForm@Radio
13201 \pdfstartlink user {%
13202 \PDFForm@Radio
13203 /AP<<%
13204 /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.

```

13205 \/\@currValue\space \DingObject
13206 >>%
13207 >>%
13208 }%
13209 \relax
13210 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
13211 \ifnum\Fld@listcount=1 %
13212 \HyField@AddToFields
13213 \fi
13214 \space % deliberate space between radio buttons
13215 }%
13216 }
13217 \newcount\Fld@listcount
13218 \def\@@Listbox#1{%
13219 \HyField@PDFChoices{#1}%
13220 \leavevmode
13221 \HyAnn@AbsPageLabel
13222 \Hy@escapeform\PDFForm@List
13223 \pdfstartlink user {\PDFForm@List}\relax
13224 \MakeChoiceField{\Fld@width}{\Fld@height}%
13225 \pdfendlink
13226 \HyField@AddToFields
13227 }
13228 \def\@PushButton[#1]#2{% parameters, label
13229 \def\Fld@name{#2}%
13230 \begingroup
13231 \expandafter\HyField@SetKeys\expandafter{%
13232 \DefaultOptionsofPushButton,#1%
13233 }%
13234 \PDFForm@Name
13235 \ifHy@pdfa
13236 \Hy@Error{%
13237 PDF/A: Push button with JavaScript is prohibited%
13238 }\@ehc
13239 \LayoutPushButtonField{%
13240 \leavevmode
13241 \MakeButtonField{#2}%
13242 }%

```

```

13243 \else
13244 \HyField@FlagsPushButton
13245 \ifFld@hidden\def\Fld@width{1sp}\fi
13246 \LayoutPushButtonField{%
13247 \leavevmode
13248 \HyAnn@AbsPageLabel
13249 \Hy@escapeform\PDFForm@Push
13250 \pdfstartlink user {\PDFForm@Push}\relax
13251 \MakeButtonField{#2}%
13252 \pdfendlink
13253 \HyField@AddToFields
13254 }%
13255 \fi
13256 \endgroup
13257 }
13258 \def\@Submit[#1]#2{%
13259 \def\Fld@width{\DefaultWidthofSubmit}%
13260 \def\Fld@height{\DefaultHeightofSubmit}%
13261 \begingroup
13262 \expandafter\HyField@SetKeys\expandafter{%
13263 \DefaultOptionsofSubmit,#1%
13264 }%
13265 \HyField@FlagsPushButton
13266 \HyField@FlagsSubmit
13267 \ifFld@hidden\def\Fld@width{1sp}\fi
13268 \leavevmode
13269 \HyAnn@AbsPageLabel
13270 \Hy@escapeform\PDFForm@Submit
13271 \pdfstartlink user {%
13272 \PDFForm@Submit
13273 /AP<</N \SubmitObject/D \SubmitPObject>>%
13274 }%
13275 \relax
13276 \MakeButtonField{#2}%
13277 \pdfendlink
13278 \HyField@AddToFields
13279 \endgroup
13280 }
13281 \def\@Reset[#1]#2{%
13282 \def\Fld@width{\DefaultWidthofReset}%
13283 \def\Fld@height{\DefaultHeightofReset}%
13284 \begingroup
13285 \expandafter\HyField@SetKeys\expandafter{%
13286 \DefaultOptionsofReset,#1%
13287 }%
13288 \leavevmode
13289 \ifHy@pdfa
13290 \Hy@Error{%
13291 PDF/A: Reset action is prohibited%
13292 }\@ehc
13293 \MakeButtonField{#2}%
13294 \else
13295 \HyField@FlagsPushButton
13296 \ifFld@hidden\def\Fld@width{1sp}\fi

```



```

13297 \HyAnn@AbsPageLabel
13298 \Hy@escapeform\PDFForm@Reset
13299 \pdfstartlink user {\PDFForm@Reset}\relax
13300 \MakeButtonField{#2}%
13301 \pdfendlink
13302 \HyField@AddToFields
13303 \fi
13304 \endgroup
13305 }
13306 \def\@CheckBox[#1]#2{% parameters, label
13307 \def\Fld@name{#2}%
13308 \def\Fld@default{0}%
13309 \begingroup
13310 \def\Fld@width{\DefaultWidthofCheckBox}%
13311 \def\Fld@height{\DefaultHeightofCheckBox}%
13312 \expandafter\HyField@SetKeys\expandafter{%
13313 \DefaultOptionsofCheckBox,#1%
13314 }%
13315 \PDFForm@Name
13316 \HyField@FlagsCheckBox
13317 \ifFld@hidden\def\Fld@width{1sp}\fi
13318 \LayoutCheckField{#2}{%
13319 \leavevmode
13320 \HyAnn@AbsPageLabel
13321 \Hy@escapeform\PDFForm@Check
13322 \pdfstartlink user {\PDFForm@Check}\relax
13323 \MakeCheckField{\Fld@width}{\Fld@height}%
13324 \pdfendlink
13325 \HyField@AddToFields
13326 }%
13327 \endgroup
13328 }
13329 \def\Hy@FormObjects{%
13330 \pdfobj {%
13331 <<%
13332 /Type/Encoding%
13333 /Differences%
13334 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13335 /ring/tilde %
13336 39/quotesingle %
13337 96/grave %
13338 128/bullet/dagger/daggerdbl/ellipsis/emdash/enddash/florin%
13339 /fraction/guilsingleft/guilsingright/minus/perthousand%
13340 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13341 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13342 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13343 160/Euro %
13344 164/currency %
13345 166/brokenbar %
13346 168/dieresis/copyright/ordfeminine %
13347 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13348 /twosuperior/threesuperior/acute/mu %
13349 183/periodcentered/cedilla/onesuperior/ordmasculine %
13350 188/onequarter/onehalf/threequarters %

```

```

13351      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13352      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13353      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13354      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13355      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13356      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13357      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13358      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13359      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13360      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13361      ]%
13362      >>%
13363      }%
13364      \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
13365      \pdfobj{%
13366      <<%
13367      /Type/Font%
13368      /Subtype/Type1%
13369      /Name/ZaDb%
13370      /BaseFont/ZapfDingbats%
13371      >>%
13372      }%
13373      \xdef\OBJ@ZaDb{\the\pdfastobj}%
13374      \pdfobj{%
13375      <<%
13376      /Type/Font%
13377      /Subtype/Type1%
13378      /Name/Helv%
13379      /BaseFont/Helvetica%
13380      /Encoding \OBJ@pdfdocencoding\space 0 R%
13381      >>%
13382      }%
13383      \xdef\OBJ@Helv{\the\pdfastobj}%
13384      \global\let\Hy@FormObjects\relax
13385      }
13386      </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.

```
13387 <*dvipdfm | xetex>
```

\@Gauge

```

13388 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13389   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13390 }

```

\@Form

```

13391 \def\@Form[#1]{%
13392   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13393   \kvsetkeys{Form}{#1}%
13394   \Hy@FormObjects
13395   \@pdfm@mark{obj @afields []}%

```

```

13396 \@pdfm@mark{obj @corder []}%
13397 \@pdfm@mark{%
13398   obj @aform <<%
13399   /Fields @afields%
13400   /DR<<%
13401   /Font<<%
13402   /ZaDb @OBJZaDb%
13403   /Helv @OBJHelv%
13404   >>%
13405   >>%
13406   /DA(/Helv 10 Tf 0 g)%
13407   /CO @corder%
13408   \ifHy@pdfa
13409   \else
13410     \ifHyField@NeedAppearances
13411       /NeedAppearances true%
13412     \fi
13413   \fi
13414   >>%
13415 }%
13416 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
13417 }

```

\@endForm

```
13418 \let\@endForm\ltx@empty
```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

13419 \def\dvipdfm@setdim{%
13420   height \the\ht\pdfm@box\space
13421   width \the\wd\pdfm@box\space
13422   depth \the\dp\pdfm@box\space
13423 }

```

\HyField@AnnotCount

```

13424 \newcount\HyField@AnnotCount
13425 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

13426 \def\HyField@AdvanceAnnotCount{%
13427   \global\advance\HyField@AnnotCount\@ne
13428 }

```

\HyField@TheAnnotCount

```

13429 \def\HyField@TheAnnotCount{%
13430   \the\HyField@AnnotCount
13431 }

```

\Fld@pageobjref

```
13432 \def\Fld@pageobjref{/P @thispage}%
```

\HyField@AddToFields

```

13433 \def\HyField@AddToFields#1{%
13434   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%

```

```

13435 \ifx\Fld@calculate@code\ltx@empty
13436 \else
13437 \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
13438 \fi
13439 }

```

\@TextField

```

13440 \def\@TextField[#1]#2{% parameters, label
13441 \def\Fld@name{#2}%
13442 \let\Fld@default\ltx@empty
13443 \let\Fld@value\@empty
13444 \def\Fld@width{\DefaultWidthofText}%
13445 \def\Fld@height{%
13446 \ifFld@multiline
13447 \DefaultHeightofTextMultiline
13448 \else
13449 \DefaultHeightofText
13450 \fi
13451 }%
13452 \begingroup
13453 \expandafter\HyField@SetKeys\expandafter{%
13454 \DefaultOptionsofText,#1%
13455 }%
13456 \PDFForm@Name
13457 \HyField@FlagsText
13458 \ifFld@hidden\def\Fld@width{1sp}\fi
13459 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13460 \setbox\pdfm@box=\hbox{%
13461 \MakeTextField{\Fld@width}{\Fld@height}%
13462 }%
13463 \HyField@AdvanceAnnotCount
13464 \LayoutTextField{#2}{%
13465 \leavevmode
13466 \Hy@escapeform\PDFForm@Text
13467 \@pdfm@mark{%
13468 ann @text\HyField@TheAnnotCount\space
13469 \dvi@pdfm@setdim << \PDFForm@Text >>%
13470 }%
13471 }%
13472 \unhbox\pdfm@box
13473 \HyField@AddToFields{text}%
13474 % record in @afields array
13475 \endgroup
13476 }

```

\@ChoiceMenu

```

13477 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13478 \def\Fld@name{#2}%
13479 \let\Fld@default\relax
13480 \let\Fld@value\relax
13481 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13482 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13483 \begingroup
13484 \Fld@menulength=0 %

```

```

13485 \@tempdima\z@
13486 \@for\@curropt:=#3\do{%
13487 \expandafter\Fld@checkequals\@curropt==\\%
13488 \Hy@StepCount\Fld@menulength
13489 \settowidth{\@tempdimb}{\@currDisplay}%
13490 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13491 }%
13492 \advance\@tempdima by 15\p@
13493 \begingroup
13494 \HyField@SetKeys{#1}%
13495 \edef\x{\endgroup
13496 \noexpand\expandafter
13497 \noexpand\HyField@SetKeys
13498 \noexpand\expandafter{%
13499 \expandafter\noexpand\csname DefaultOptionsof%
13500 \ifFld@radio
13501 Radio%
13502 \else
13503 \ifFld@combo
13504 \ifFld@popdown
13505 PopdownBox%
13506 \else
13507 ComboBox%
13508 \fi
13509 \else
13510 ListBox%
13511 \fi
13512 \fi
13513 \endcsname
13514 }%
13515 }\x
13516 \HyField@SetKeys{#1}%
13517 \PDFForm@Name
13518 \ifFld@hidden\def\Fld@width{1sp}\fi
13519 \ifx\Fld@value\relax
13520 \let\Fld@value\Fld@default
13521 \fi
13522 \LayoutChoiceField{#2}{%
13523 \ifFld@radio
13524 \HyField@FlagsRadioButton
13525 \@@Radio{#3}%
13526 \else
13527 \begingroup
13528 \HyField@FlagsChoice
13529 \ifdim\Fld@width<\@tempdima
13530 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13531 \edef\Fld@width{\the\@tempdima}%
13532 \fi
13533 \ifFld@combo
13534 \else
13535 \@tempdima=\the\Fld@menulength\Fld@charsize
13536 \advance\@tempdima by \Fld@borderwidth bp %
13537 \advance\@tempdima by \Fld@borderwidth bp %
13538 \edef\Fld@height{\the\@tempdima}%

```

```

13539     \fi
13540     \@@ListBox{#3}%
13541     \endgroup
13542     \fi
13543   }%
13544 \endgroup
13545 }

```

\@@Radio

```

13546 \def\@@Radio#1{%
13547   \Fld@listcount=0 %
13548   \EdefEscapeName\Fld@default{\Fld@default}%
13549   \setbox\pdfm@box=\hbox{%
13550     \MakeRadioField{\Fld@width}{\Fld@height}%
13551   }%
13552   \@for\@curropt:=#1\do{%
13553     \expandafter\Fld@checkequals\@curropt==\%
13554     \EdefEscapeName\@currValue{\@currValue}%
13555     \Hy@StepCount\Fld@listcount
13556     \@currDisplay\space
13557     \leavevmode
13558     \Hy@escapeform\PDFForm@Radio
13559     \ifnum\Fld@listcount=1 %
13560       \HyField@AdvanceAnnotCount
13561     \fi
13562     \@pdfm@mark{%
13563       ann %
13564       \ifnum\Fld@listcount=1 %
13565         @radio\HyField@TheAnnotCount%
13566       \space
13567     \fi
13568     \dvipdfm@setdim
13569     <<%
13570     \PDFForm@Radio
13571     /AP<</N<</\@currValue /null>>>>%
13572     >>%
13573   }%
13574   \unhcopy\pdfm@box\space% deliberate space between radio buttons
13575   \ifnum\Fld@listcount=1 %
13576     \HyField@AddToFields{radio}%
13577   \fi
13578 }%
13579 }

```

\Fld@listcount

```

13580 \newcount\Fld@listcount

```

\@@ListBox

```

13581 \def\@@ListBox#1{%
13582   \HyField@PDFChoices{#1}%
13583   \setbox\pdfm@box=\hbox{%
13584     \MakeChoiceField{\Fld@width}{\Fld@height}%
13585   }%
13586   \leavevmode

```

```

13587 \Hy@escapeform\PDFForm@List
13588 \HyField@AdvanceAnnotCount
13589 \@pdfm@mark{%
13590   ann @list\HyField@TheAnnotCount\space
13591   \dvipdfm@setdim
13592   <<\PDFForm@List>>%
13593 }%
13594 \unhbox\pdfm@box
13595 \HyField@AddToFields{list}%
13596 }

```

\@PushButton

```

13597 \def\@PushButton[#1]#2{% parameters, label
13598   \def\Fld@name{#2}%
13599   \begingroup
13600     \expandafter\HyField@SetKeys\expandafter{%
13601       \DefaultOptionsofPushButton,#1%
13602     }%
13603     \PDFForm@Name
13604     \ifHy@pdfa
13605       \Hy@Error{%
13606         PDF/A: Push button with JavaScript is prohibited%
13607       } \@ehc
13608     \LayoutPushButtonField{%
13609       \leavevmode
13610       \MakeButtonField{#2}%
13611     }%
13612   \else
13613     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13614     \HyField@FlagsPushButton
13615     \ifFld@hidden\def\Fld@width{1sp}\fi
13616     \HyField@AdvanceAnnotCount
13617     \LayoutPushButtonField{%
13618       \leavevmode
13619       \Hy@escapeform\PDFForm@Push
13620       \@pdfm@mark{%
13621         ann @push\HyField@TheAnnotCount\space
13622         \dvipdfm@setdim
13623         <<\PDFForm@Push>>%
13624       }%
13625     }%
13626     \unhbox\pdfm@box
13627     \HyField@AddToFields{push}%
13628   \fi
13629 \endgroup
13630 }

```

\@Submit

```

13631 \def\@Submit[#1]#2{%
13632   \def\Fld@width{\DefaultWidthofSubmit}%
13633   \def\Fld@height{\DefaultHeightofSubmit}%
13634   \begingroup
13635     \expandafter\HyField@SetKeys\expandafter{%
13636       \DefaultOptionsofSubmit,#1%

```

```

13637 }%
13638 \HyField@FlagsPushButton
13639 \HyField@FlagsSubmit
13640 \ifFld@hidden\def\Fld@width{1sp}\fi
13641 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13642 \leavevmode
13643 \Hy@escapeform\PDFForm@Submit
13644 \HyField@AdvanceAnnotCount
13645 \@pdfm@mark{%
13646   ann @submit\HyField@TheAnnotCount\space
13647   \dviPDFForm@setdim
13648   <<\PDFForm@Submit>>%
13649 }%
13650 \unhbox\pdfm@box%
13651 \HyField@AddToFields{submit}%
13652 \endgroup
13653 }

```

\@Reset

```

13654 \def\@Reset[#1]#2{%
13655   \def\Fld@width{\DefaultWidthofReset}%
13656   \def\Fld@height{\DefaultHeightofReset}%
13657   \begingroup
13658     \expandafter\HyField@SetKeys\expandafter{%
13659       \DefaultOptionsofReset,#1%
13660     }%
13661     \leavevmode
13662     \ifHy@pdfa
13663       \Hy@Error{%
13664         PDF/A: Reset action is prohibited%
13665       }\@ehc
13666       \MakeButtonField{#2}%
13667     \else
13668       \HyField@FlagsPushButton
13669       \ifFld@hidden\def\Fld@width{1sp}\fi
13670       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13671       \Hy@escapeform\PDFForm@Reset
13672       \HyField@AdvanceAnnotCount
13673       \@pdfm@mark{%
13674         ann @reset\HyField@TheAnnotCount\space
13675       \dviPDFForm@setdim
13676       <<\PDFForm@Reset>>%
13677     }%
13678     \unhbox\pdfm@box
13679     \HyField@AddToFields{reset}%
13680   \fi
13681 \endgroup
13682 }

```

\@CheckBox

```

13683 \def\@CheckBox[#1]#2{% parameters, label
13684   \def\Fld@name{#2}%
13685   \def\Fld@default{0}%
13686   \begingroup

```



```

13687 \def\Fld@width{\DefaultWidthofCheckBox}%
13688 \def\Fld@height{\DefaultHeightofCheckBox}%
13689 \expandafter\HyField@SetKeys\expandafter{%
13690 \DefaultOptionsofCheckBox,#1%
13691 }%
13692 \PDFForm@Name
13693 \HyField@FlagsCheckBox
13694 \ifFld@hidden\def\Fld@width{1sp}\fi
13695 \setbox\pdfm@box=\hbox{%
13696 \MakeCheckField{\Fld@width}{\Fld@height}%
13697 }%
13698 \HyField@AdvanceAnnotCount
13699 \LayoutCheckField{#2}{%
13700 \leavevmode
13701 \Hy@escapeform\PDFForm@Check
13702 \@pdfm@mark{%
13703 ann @check\HyField@TheAnnotCount\space
13704 \dvi pdfm@setdim
13705 <<\PDFForm@Check>>%
13706 }%
13707 \unhbox\pdfm@box
13708 \HyField@AddToFields{check}%
13709 }%
13710 \endgroup
13711 }

13712 \def\Hy@FormObjects{%
13713 \@pdfm@mark{obj @OBJpdfdocencoding%
13714 <<%
13715 /Type/Encoding%
13716 /Differences[%
13717 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13718 39/quotesingle %
13719 96/grave %
13720 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13721 /fraction/guilsingleft/guilsingright/minus/perthousand%
13722 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
13723 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
13724 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13725 160/Euro %
13726 164/currency %
13727 166/brokenbar %
13728 168/dieresis/copyright/ordfeminine %
13729 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13730 /twosuperior/threesuperior/acute/mu %
13731 183/periodcentered/cedilla/onesuperior/ordmasculine %
13732 188/onequarter/onehalf/threequarters %
13733 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13734 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
13735 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
13736 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
13737 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
13738 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
13739 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%

```

```

13740      /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
13741      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
13742      /thorn/ydieresis%
13743      ]%
13744      >>%
13745      }%
13746      \@pdfm@mark{obj @OBJZaDb%
13747      <<%
13748      /Type/Font%
13749      /Subtype/Type1%
13750      /Name/ZaDb%
13751      /BaseFont/ZapfDingbats%
13752      >>%
13753      }%
13754      \@pdfm@mark{obj @OBJHelv%
13755      <<%
13756      /Type/Font%
13757      /Subtype/Type1%
13758      /Name/Helv%
13759      /BaseFont/Helvetica%
13760      /Encoding @OBJpdfdocencoding%
13761      >>%
13762      }%
13763      \global\let\Hy@FormObjects\relax
13764      }
13765      </dvi-pdfm | xetex>

```

44.6 Common forms part

```
13766 (*pdfform)
```

```
\Fld@pageobjref
```

```
13767 \providecommand*{\Fld@pageobjref}{}

```

```
\Hy@escapestring
```

```

13768 \@ifundefined{pdf@escapestring}
13769 {%
13770   \let\Hy@escapestring\@firstofone
13771   \def\Hy@escapeform#1{%
13772     \ifHy@pdfescapeform
13773     \def\Hy@escapestring##1{%
13774       \noexpand\Hy@escapestring{\noexpand##1}%
13775     }%
13776     \edef\Hy@temp{#1}%
13777     \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
13778     \def\Hy@escapestring##1{%
13779       \@ifundefined{Hy@esc@\string##1}{%
13780         ##1%
13781         \ThisShouldNotHappen
13782       }{%
13783         \csname Hy@esc@\string##1\endcsname
13784       }%
13785     }%
13786     \else

```

```

13787   \let\Hy@escapestring\@firstofone
13788   \fi
13789 }%
13790 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
13791   \ifx\|#3\|
13792   \else
13793     \expandafter
13794     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13795     \ltx@ReturnAfterFi{%
13796       \Hy@@escapeform#3\@nil
13797     }%
13798   \fi
13799 }%
13800 }{%
13801 \def\Hy@escapeform#1{%
13802   \ifHy@pdfescapeform
13803     \let\Hy@escapestring\pdfescapestring
13804   \else
13805     \let\Hy@escapestring\@firstofone
13806   \fi
13807 }%
13808 \Hy@escapeform{}%
13809 }

```

\PDFForm@Name

```

13810 \def\PDFForm@Name{%
13811   \PDFForm@@Name\Fld@name
13812   \ifx\Fld@altname\relax
13813   \else
13814     \PDFForm@@Name\Fld@altname
13815   \fi
13816   \ifx\Fld@mappingname\relax
13817   \else
13818     \PDFForm@@Name\Fld@mappingname
13819   \fi
13820 }

```

\PDFForm@@Name

```

13821 \def\PDFForm@@Name#1{%
13822   \begingroup
13823   \ifnum\Hy@pdf@major@minor@version<105 % implementation note 117, PDF spec 1.7
13824     \ifHy@unicode
13825       \Hy@unicodedefalse
13826     \fi
13827   \fi
13828   \pdfstringdef\Hy@gtemp#1%
13829   \endgroup
13830   \let#1\Hy@gtemp
13831 }

```

\Fld@additionalactions

```

13832 \def\Fld@@additionalactions{%
K input (keystroke) format

```

```

13833 \ifx\Fld@keystroke@code\@empty
13834 \else
13835 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13836 \fi

F display format
13837 \ifx\Fld@format@code\@empty
13838 \else
13839 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13840 \fi

V validation
13841 \ifx\Fld@validate@code\@empty
13842 \else
13843 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13844 \fi

C calculation
13845 \ifx\Fld@calculate@code\@empty
13846 \else
13847 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13848 \fi

Fo receiving the input focus
13849 \ifx\Fld@onfocus@code\@empty
13850 \else
13851 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13852 \fi

Bl loosing the input focus (blurred)
13853 \ifx\Fld@onblur@code\@empty
13854 \else
13855 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13856 \fi

D pressing the mouse button (down)
13857 \ifx\Fld@onmousedown@code\@empty
13858 \else
13859 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13860 \fi

U releasing the mouse button (up)
13861 \ifx\Fld@onmouseup@code\@empty
13862 \else
13863 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13864 \fi

E cursor enters the annotation's active area.
13865 \ifx\Fld@onenter@code\@empty
13866 \else
13867 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13868 \fi

X cursor exits the annotation's active area.
13869 \ifx\Fld@onexit@code\@empty
13870 \else
13871 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13872 \fi

```

```

13873 }
13874 \def\Fld@additionalactions{%
13875 \if-\Fld@@additionalactions-%
13876 \else
13877 \ifHy@pdfa
13878 \else
13879 /AA<<\Fld@@additionalactions>>%
13880 \fi
13881 \fi
13882 }

```

\Fld@annotnames

```

13883 \def\Fld@annotnames{%
13884 /T(\Fld@name)%
13885 \ifx\Fld@altname\relax
13886 \else
13887 /TU(\Fld@altname)%
13888 \fi
13889 \ifx\Fld@mappingname\relax
13890 \else
13891 /TM(\Fld@mappingname)%
13892 \fi
13893 }

```

\PDFForm@Check

```

13894 \def\PDFForm@Check{%
13895 /Subtype/Widget%
13896 \Fld@annotflags
13897 \Fld@pageobjref
13898 \Fld@annotnames
13899 /FT/Btn%
13900 \Fld@flags
13901 /Q \Fld@align
13902 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13903 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
13904 /MK<<%
13905 \ifnum\Fld@rotation=\z@
13906 \else
13907 /R \Fld@rotation
13908 \fi
13909 \ifx\Fld@bordercolor\relax
13910 \else
13911 /BC[\Fld@bordercolor]%
13912 \fi
13913 \ifx\Fld@bcolor\relax
13914 \else
13915 /BG[\Fld@bcolor]%
13916 \fi
13917 /CA(\Hy@escapestring{\Fld@cbsymbol})%
13918 >>%
13919 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13920 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13921 /H/P%
13922 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi

```

```
13923 \Fld@additionalactions
13924 }
```

\PDFForm@Push

```
13925 \ifHy@pdfa
13926 \else
13927 \def\PDFForm@Push{%
13928 /Subtype/Widget%
13929 \Fld@annotflags
13930 \Fld@pageobjref
13931 \Fld@annotnames
13932 /FT/Btn%
13933 \Fld@flags
13934 /H/P%
13935 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13936 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13937 \ifx\Fld@bordercolor\relax\else 1\fi
13938 \space
13939 \else
13940 /MK<<%
13941 \ifnum\Fld@rotation=\z@
13942 \else
13943 /R \Fld@rotation
13944 \fi
13945 \ifx\Fld@bordercolor\relax
13946 \else
13947 /BC[\Fld@bordercolor]%
13948 \fi
13949 >>%
13950 \fi
13951 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
13952 \Fld@additionalactions
13953 }%
13954 \fi
```

\PDFForm@List

```
13955 \def\PDFForm@List{%
13956 /Subtype/Widget%
13957 \Fld@annotflags
13958 \Fld@pageobjref
13959 \Fld@annotnames
13960 /FT/Ch%
13961 \Fld@flags
13962 /Q \Fld@align
13963 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13964 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13965 \ifx\Fld@bordercolor\relax\else 1\fi
13966 \ifx\Fld@bcolor\relax \else 1\fi
13967 \space
13968 \else
13969 /MK<<%
13970 \ifnum\Fld@rotation=\z@
13971 \else
13972 /R \Fld@rotation
```

```

13973 \fi
13974 \ifx\Fld@bordercolor\relax
13975 \else
13976 /BC[\Fld@bordercolor]%
13977 \fi
13978 \ifx\Fld@bcolor\relax
13979 \else
13980 /BG[\Fld@bcolor]%
13981 \fi
13982 >>%
13983 \fi
13984 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
13985 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13986 \Fld@choices
13987 \Fld@additionalactions
13988 }

```

\PDFForm@Radio

```

13989 \def\PDFForm@Radio{%
13990 /Subtype/Widget%
13991 \Fld@annotflags
13992 \Fld@pageobjref
13993 \Fld@annotnames
13994 /FT/Btn%
13995 \Fld@flags
13996 /H/P%
13997 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13998 /MK<<%
13999 \ifnum\Fld@rotation=\z@
14000 \else
14001 /R \Fld@rotation
14002 \fi
14003 \ifx\Fld@bordercolor\relax
14004 \else
14005 /BC[\Fld@bordercolor]%
14006 \fi
14007 \ifx\Fld@bcolor\relax
14008 \else
14009 /BG[\Fld@bcolor]%
14010 \fi
14011 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14012 >>%
14013 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14014 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14015 \ifx\Fld@default\@empty
14016 /V/Off%
14017 /DV/Off%
14018 \else
14019 /V/\Fld@default
14020 /DV/\Fld@default
14021 \fi
14022 \Fld@additionalactions
14023 }

```

\PDFForm@Text

```
14024 \def\PDFForm@Text{%
14025 /Subtype/Widget%
14026 \Fld@annotflags
14027 \Fld@pageobjref
14028 \Fld@annotnames
14029 /FT/Tx%
14030 \Fld@flags
14031 /Q \Fld@align
14032 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14033 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14034     \ifx\Fld@bordercolor\relax\else 1\fi
14035     \ifx\Fld@bcolor\relax \else 1\fi
14036     \space
14037 \else
14038 /MK<<%
14039     \ifnum\Fld@rotation=\z@
14040     \else
14041     /R \Fld@rotation
14042     \fi
14043     \ifx\Fld@bordercolor\relax
14044     \else
14045     /BC[\Fld@bordercolor]%
14046     \fi
14047     \ifx\Fld@bcolor\relax
14048     \else
14049     /BG[\Fld@bcolor]%
14050     \fi
14051 >>%
14052 \fi
14053 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14054     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14055 /DV(\Hy@escapestring{\Fld@default})%
14056 /V(\Hy@escapestring{\Fld@value})%
14057 \Fld@additionalactions
14058 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14059 }
```

\PDFForm@Submit

```
14060 \def\PDFForm@Submit{%
14061 /Subtype/Widget%
14062 \Fld@annotflags
14063 \Fld@pageobjref
14064 \Fld@annotnames
14065 /FT/Btn%
14066 \Fld@flags
14067 /H/P%
14068 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14069 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14070     \ifx\Fld@bordercolor\relax\else 1\fi
14071     \space
14072 \else
14073 /MK<<%
14074     \ifnum\Fld@rotation=\z@
```



```

14075 \else
14076 /R \Fld@rotation
14077 \fi
14078 \ifx\Fld@bordercolor\relax
14079 \else
14080 /BC[\Fld@bordercolor]%
14081 \fi
14082 >>%
14083 \fi
14084 /A<<%
14085 /S/SubmitForm%
14086 /F<<%
14087 /FS/URL%
14088 /F(\Hy@escapestring{\Form@action})%
14089 >>%
14090 \Fld@submitflags
14091 >>%
14092 \Fld@additionalactions
14093 }

```

\PDFForm@Reset

```

14094 \ifHy@pdfa
14095 \else
14096 \def\PDFForm@Reset{%
14097 /Subtype/Widget%
14098 \Fld@annotflags
14099 \Fld@pageobjref
14100 \Fld@annotnames
14101 /FT/Btn%
14102 \Fld@flags
14103 /H/P%
14104 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14105 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14106 \ifx\Fld@bordercolor\relax\else 1\fi
14107 \space
14108 \else
14109 /MK<<%
14110 \ifnum\Fld@rotation=\z@
14111 \else
14112 /R \Fld@rotation
14113 \fi
14114 \ifx\Fld@bordercolor\relax
14115 \else
14116 /BC[\Fld@bordercolor]%
14117 \fi
14118 % /CA (Clear)
14119 % /AC (Done)
14120 >>%
14121 \fi
14122 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14123 /A<</S/ResetForm>>%
14124 \Fld@additionalactions
14125 }%
14126 \fi

```

```
14127 </pdfform>
14128 <*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`

```
14129 \def\phantomsection{%
14130   \Hy@MakeCurrentHrefAuto{section*}%
14131   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
14132 }
14133 </packageEnd>
```

45.1 Bookmarks

```
14134 <*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.

```
14135 \def\Hy@writebookmark#1#2#3#4#5{%
14136   % section number, text, label, level, file
14137   \ifx\WriteBookmarks\relax%
14138     \else
14139     \ifnum#4>\Hy@bookmarksdepth\relax
14140     \else
14141     \@writetorep{#1}{#2}{#3}{#4}{#5}%
14142     \fi
14143     \fi
14144 }
14145 \def\Hy@currentbookmarklevel{0}
14146 \def\Hy@numberline#1{#1 }
```

```

14147 \def\@@writetorep#1#2#3#4#5{%
14148   \begingroup
14149   \edef\Hy@tempa{#5}%
14150   \ifx\Hy@tempa\Hy@bookmarkstype
14151     \edef\Hy@level{#4}%
14152     \ifx\Hy@levelcheck Y%
14153       \@tempcnta\Hy@level\relax
14154       \advance\@tempcnta by -1 %
14155       \ifnum\Hy@currentbookmarklevel<\@tempcnta
14156         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
14157         \advance\@tempcnta by 1 %
14158         \Hy@Warning{%
14159           Difference (\the\@tempcnta) between bookmark levels is %
14160           greater \MessageBreak than one, level fixed%
14161         }%
14162         \@tempcnta\Hy@currentbookmarklevel
14163         \advance\@tempcnta by 1 %
14164         \edef\Hy@level{\the\@tempcnta}%
14165       \fi
14166     \else
14167       \global\let\Hy@levelcheck Y%
14168     \fi
14169     \global\let\Hy@currentbookmarklevel\Hy@level
14170     \@tempcnta\Hy@level\relax
14171     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
14172     \advance\@tempcnta by -1 %
14173     \edef\Hy@tempa{#3}%
14174     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
14175     \ifx\Hy@tempa\Hy@tempb
14176       \Hy@Warning{%
14177         The anchor of a bookmark and its parent's must not%
14178         \MessageBreak be the same. Added a new anchor%
14179       }%
14180     \phantomsection
14181     \fi
14182     \ifHy@bookmarksnumbered
14183       \let\numberline\Hy@numberline
14184       \let\booknumberline\Hy@numberline
14185       \let\partnumberline\Hy@numberline
14186       \let\chapternumberline\Hy@numberline
14187     \else
14188       \let\numberline\@gobble
14189       \let\booknumberline\@gobble
14190       \let\partnumberline\@gobble
14191       \let\chapternumberline\@gobble
14192     \fi
14193     \pdfstringdef\Hy@tempa{#2}%
14194     \HyPsd@SanitizeForOutFile\Hy@tempa
14195     \if@filesw
14196       \stepcounter{bookmark@seq@number}%
14197       \@ifundefined{@outlinefile}{%
14198         }{%
14199           \protected@write\@outlinefile}{%
14200             \protect\BOOKMARK

```

```

14201      [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
14202      {\Hy@tempa}{\Hy@tempb}%
14203      \@percentchar\space\thebookmark@seq@number
14204      }%
14205      }%
14206      \fi
14207      \fi
14208      \endgroup
14209      }
14210      \newcounter{bookmark@seq@number}

14211      \begingroup
14212      \lccode`(`=`{%
14213      \lccode`)`=`}%
14214      \lccode`1`=\z@
14215      \lccode`2`=\z@
14216      \lccode`3`=\z@
14217      \lccode`5`=\z@
14218      \lccode`7`=\z@
14219      \lccode`\#`=\z@
14220      \lccode`\` `=\z@
14221      \lccode`\{`=\z@
14222      \lccode`\}`=\z@
14223      \lowercase{%
14224      \endgroup
14225      \def\HyPsd@SanitizeForOutFile#1{%
14226      \@onelevel@sanitize\Hy@tempa
14227      \escapechar`\\%
14228      \edef\Hy@tempa{%
14229      \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
14230      }%
14231      \edef\Hy@tempa{%
14232      \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
14233      }%
14234      }%
14235      \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
14236      #1%
14237      \ifx\\#2\\%
14238      \expandafter\ltx@gobble
14239      \else
14240      \expandafter\ltx@firstofone
14241      \fi
14242      {%
14243      \string\173%
14244      \HyPsd@SanitizeOut@BraceLeft#2\@nil
14245      }%
14246      }%
14247      \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
14248      #1%
14249      \ifx\\#2\\%
14250      \expandafter\ltx@gobble
14251      \else
14252      \expandafter\ltx@firstofone
14253      \fi
14254      {%

```

```

14255 \string\175%
14256 \HyPsd@SanitizeOut@BraceRight#2\@nil
14257 }%
14258 }%
14259 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

14260 \newcommand{\currentpdfbookmark}{%
14261 \pdfbookmark[\Hy@currentbookmarklevel]%
14262 }
14263 \newcommand{\subpdfbookmark}{%
14264 \@tempcnta\Hy@currentbookmarklevel
14265 \Hy@StepCount\@tempcnta
14266 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
14267 }
14268 \newcommand{\belowpdfbookmark}[2]{%
14269 \@tempcnta\Hy@currentbookmarklevel
14270 \Hy@StepCount\@tempcnta
14271 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
14272 \advance\@tempcnta by -1 %
14273 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
14274 }

```

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.

```

14275 \renewcommand\pdfbookmark[3][0]{%
14276 \Hy@writebookmark}{#2}{#3.#1}{#1}{toc}%
14277 \hyper@anchorstart{#3.#1}\hyper@anchorend
14278 }
14279 \def\BOOKMARK{%
14280 \@ifnextchar{\@BOOKMARK}{\@BOOKMARK[1][-]}%
14281 }
14282 \def\@BOOKMARK[#1]{%
14283 \@ifnextchar{\@BOOKMARK[#{#1}]}{\@BOOKMARK[#{#1}][-]}%
14284 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfopdf` macros.

45.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

14285 \RequirePackage{rerunfilecheck}[2009/12/10]
14286 \def\Hy@OutlineRerunCheck{%
14287 \RerunFileCheck{\jobname.out}{%
14288 \immediate\closeout\@outlinefile
14289 }{%
14290 Rerun to get outlines right\MessageBreak
14291 or use package `bookmark'%
14292 }%
14293 }

```

45.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping \ and the like.

```
14294 (*vtex)
```

```
14295 \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.

```
14296 \begingroup
```

```
14297 \catcode\`=12 %
```

```
14298 \ifnum\Hy@VTeXversion<650 %
```

```
14299 \catcode\`=12 %
```

```
14300 \gdef\hv@pdf@char#1#2#3{%
```

```
14301 \char
```

```
14302 \ifcase'#1#2#3 %
```

```
14303 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
```

```
14304 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
```

```
14305 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
```

```
14306 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
```

```
14307 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
```

```
14308 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
```

```
14309 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
```

```
14310 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
```

```
14311 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
```

```
14312 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
```

```
14313 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
```

```
14314 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
```

```
14315 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
```

```
14316 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
```

```
14317 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
```

```
14318 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
```

```
14319 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
```

```
14320 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
```

```
14321 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
```

```
14322 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
```

```
14323 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
```

```
14324 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
```

```
14325 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
```

```
14326 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
```

```
14327 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
```

```
14328 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
```

```
14329 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
```

```
14330 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
```

```
14331 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
```

```
14332 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
```

```
14333 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
```

```
14334 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
```

```
14335 \fi
```

```
14336 }%
```

```

14337 \else
14338 \gdef\hv@pdf@char{\char'}%
14339 \fi
14340 \endgroup

```

\@@BOOKMARK

```

14341 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14342 \expandafter\edef\csname @count@#3\endcsname{%
14343 \the\@serial@counter
14344 }%
14345 \edef\@mycount{\the\@serial@counter}%
14346 \Hy@StepCount\@serial@counter
14347 \edef\@parcount{%
14348 \expandafter\ifx\csname @count@#5\endcsname\relax
14349 0%
14350 \else
14351 \csname @count@#5\endcsname
14352 \fi
14353 }%
14354 \immediate\special{%
14355 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14356 s=\ifx#2-c\else o\fi,t=#4%
14357 }%
14358 }%

```

\ReadBookmarks

```

14359 \def\ReadBookmarks{%
14360 \begingroup
14361 \def\0{\hv@pdf@char 0}%
14362 \def\1{\hv@pdf@char 1}%
14363 \def\2{\hv@pdf@char 2}%
14364 \def\3{\hv@pdf@char 3}%
14365 \def\({}%
14366 \def\)}%
14367 \def\do##1{%
14368 \ifnum\catcode`##1=\active
14369 \@makeother##1%
14370 \else
14371 \ifnum\catcode`##1=6 %
14372 \@makeother##1%
14373 \fi
14374 \fi
14375 }%
14376 \dospecials
14377 \Hy@safe@activestrue
14378 \InputIfFileExists{\jobname.out}{-}{-}%
14379 \endgroup
14380 \ifx\WriteBookmarks\relax
14381 \else
14382 \if@filesw
14383 \newwrite\@outlinefile
14384 \Hy@OutlineRerunCheck
14385 \immediate\openout\@outlinefile=\jobname.out\relax
14386 \fi

```

```

14387 \fi
14388 }

14389 </vtex>
14390 <*\vtex>
14391 \def\ReadBookmarks{%
14392 \pdf@ifdraftmode{}{%
14393 \begingroup
14394 \def\do###1{%
14395 \ifnum\catcode`###1=\active
14396 \@makeother###1%
14397 \else
14398 \ifnum\catcode`###1=6 %
14399 \@makeother###1%
14400 \fi
14401 \fi
14402 }%
14403 \dospecials
14404 \Hy@safe@activetrue
14405 \escapechar=`\%
14406 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14407 \calc@bm@number{##5}%
14408 }%
14409 \InputIfFileExists{jobname.out}{-}{-}%
14410 \ifx\WriteBookmarks\relax
14411 \global\let\WriteBookmarks\relax
14412 \fi
14413 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14414 \def\Hy@temp{##4}%
14415 <*\pdfTeX>
14416 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14417 \Hy@OutlineName{}\Hy@pstringName{%
14418 ##2\check@bm@number{##3}}%
14419 }{%
14420 \expandafter\strip@prefix\meaning\Hy@temp
14421 }%
14422 </pdfTeX>
14423 <*\pdfmark>
14424 \pdfmark{%
14425 pdfmark=/OUT,%
14426 Count={##2\check@bm@number{##3}},%
14427 Dest={##3},%
14428 Title=\expandafter\strip@prefix\meaning\Hy@temp
14429 }%
14430 </pdfmark>
14431 <*\dviPDFM|xetex>
14432 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14433 \@pdfm@mark{%
14434 outline \ifHy@DvipdfmxOutlineOpen
14435 [%
14436 \ifnum##21>\z@
14437 \else
14438 -%
14439 \fi

```



```

14440         | %
14441         \fi
14442         ##1<<%
14443         /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14444         /A<<%
14445         /S/GoTo%
14446         /D(\Hy@pstringName)%
14447         >>%
14448         >>%
14449         }%
14450 </dvipdfm | xetex>
14451     }%
14452     \begingroup
14453     \def\WriteBookmarks{0}%
14454     \InputIfFileExists{jobname.out}{-}{-}%
14455     \endgroup
14456     %{\escapechar@m@ne\InputIfFileExists{jobname.out}{-}{-}}%
14457     \endgroup
14458 }%
14459 \ifx\WriteBookmarks\relax
14460 \else
14461     \if@filesw
14462     \newwrite\@outlinefile
14463     \Hy@OutlineRerunCheck
14464     \immediate\openout\@outlinefile=jobname.out\relax
14465     \fi
14466 \fi
14467 }
14468 (*pdfTeX)
14469 \def\Hy@OutlineName#1#2#3#4{%
14470 \pdfoutline goto name{#2}count#3{#4}%
14471 }
14472 </pdfTeX>
14473 \def\check@bm@number#1{%
14474 \expandafter\ifx\csname B_#1\endcsname\relax
14475 0%
14476 \else
14477 \csname B_#1\endcsname
14478 \fi
14479 }
14480 \def\calc@bm@number#1{%
14481 \@tempcnta=\check@bm@number{#1}\relax
14482 \advance\@tempcnta by 1 %
14483 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14484 }
14485 </!vtex>

14486 \ifHy@implicit
14487 \else
14488 \expandafter\endinput
14489 \fi

14490 </outlines>
14491 (*outlines | hypertex)
14492 \newlength\Hy@SectionHShift

```

```

14493 \def\Hy@SectionAnchorHref#1{%
14494   \ifx\protect\@typeset@protect
14495     \Hy@@SectionAnchor{#1}%
14496   \fi
14497 }
14498 \DeclareRobustCommand*\Hy@@SectionAnchor}[1]{%
14499   \leavevmode
14500   \hbox to Opt{%
14501     \kern-\Hy@SectionHShift
14502     \Hy@raisedlink{%
14503       \hyper@anchorstart{#1}\hyper@anchorend
14504     }%
14505     \hss
14506   }%
14507 }
14508 \AddToNoCaseChangeList{\Hy@@SectionAnchor}
14509 \@ifundefined{hyper@nopatch@sectioning}
14510 {
14511   \let\H@old@ssect\@ssect
14512   \def\@ssect#1#2#3#4#5{%
14513     \Hy@MakeCurrentHrefAuto{section*}%
14514     \setlength{\Hy@SectionHShift}{#1}%
14515     \begingroup
14516     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14517     \toks\tw@\expandafter{%
14518       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14519       #5%
14520     }%
14521     \edef\x{\endgroup
14522       \the\toks@\the\toks\tw@}%
14523     }\x
14524 }
14525 \let\H@old@schapter\@schapter
14526 \def\@schapter#1{%
14527   \begingroup
14528   \let\@mkboth\@gobbletwo
14529   \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14530   \Hy@raisedlink{%
14531     \hyper@anchorstart{\@currentHref}\hyper@anchorend
14532   }%
14533   \endgroup
14534   \H@old@schapter{#1}%
14535 }

```

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:

```

14536 \ltx@ifundefined{@chapter}{-}{%
14537   \let\Hy@org@chapter\@chapter
14538   \def\@chapter{%
14539     \def\Hy@next{%
14540       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14541       \Hy@raisedlink{%
14542         \hyper@anchorstart{\@currentHref}\hyper@anchorend

```

```

14543 }%
14544 }%
14545 \ifnum\c@secnumdepth>\m@ne
14546 \ltx@ifundefined{if@mainmatter}%
14547 \iftrue{\csname if@mainmatter\endcsname}%
14548 \let\Hy@next\relax
14549 \fi
14550 \fi
14551 \Hy@next
14552 \Hy@org@chapter
14553 }%
14554 }

14555 \let\H@old@part\@part
14556 \@ifundefined{chapter}
14557 {\let\Hy@secnum@part\z@}
14558 {\let\Hy@secnum@part\m@ne}
14559 \def\@part{%
14560 \ifnum\Hy@secnum@part>\c@secnumdepth
14561 \phantomsection
14562 \fi
14563 \H@old@part
14564 }

14565 \let\H@old@spart\@spart
14566 \def\@spart#1{%
14567 \Hy@MakeCurrentHrefAuto{part*}%
14568 \Hy@raisedlink{%
14569 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14570 }%
14571 \H@old@spart{#1}%
14572 }

14573 \let\H@old@sect\@sect
14574 \def\@sect#1#2#3#4#5#6[#7]#8{%
14575 \ifnum #2>\c@secnumdepth
14576 \expandafter\@firstoftwo
14577 \else
14578 \expandafter\@secondoftwo
14579 \fi
14580 {%
14581 \Hy@MakeCurrentHrefAuto{section*}%
14582 \setlength{\Hy@SectionHShift}{#3}%
14583 \begingroup
14584 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
14585 \toks\tw@\expandafter{%
14586 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14587 #8%
14588 }%
14589 \edef\x{\endgroup
14590 \the\toks@\the\toks\tw@}%
14591 }\x
14592 }{%
14593 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
14594 }%
14595 }

```

```

14596 }{}
14597 </outlines | hypertext>
14598 (*outlines)

14599 \expandafter\def\csname Parent-4\endcsname{}
14600 \expandafter\def\csname Parent-3\endcsname{}
14601 \expandafter\def\csname Parent-2\endcsname{}
14602 \expandafter\def\csname Parent-1\endcsname{}
14603 \expandafter\def\csname Parent0\endcsname{}
14604 \expandafter\def\csname Parent1\endcsname{}
14605 \expandafter\def\csname Parent2\endcsname{}
14606 \expandafter\def\csname Parent3\endcsname{}
14607 \expandafter\def\csname Parent4\endcsname{}

14608 </outlines>

```

46 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

46.1 PD1 encoding

```

14609 (*pd1enc)
14610 \DeclareFontEncoding{PD1}{}{}

Accents
14611 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14612 \DeclareTextAccent{\'}{PD1}{\textacute}
14613 \DeclareTextAccent{\^}{PD1}{\textasciicircum}
14614 \DeclareTextAccent{\~}{PD1}{\texttilde}
14615 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
14616 \DeclareTextAccent{\r}{PD1}{\textring}
14617 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14618 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
14619 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14620 \DeclareTextAccent{=} {PD1}{\textasciimacron}
14621 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14622 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14623 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14624 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
14625 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
14626 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14627 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
14628 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
14629 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14630 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14631 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14632 \DeclareTextCompositeCommand{=} {PD1}{\@empty}{\textasciimacron}
14633 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14634 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14635 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
14636 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
14637 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}

```

```

14638 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14639 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
14640 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
14641 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14642 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14643 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14644 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
14645 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14646 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14647 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14648 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14649 \DeclareTextCommand{\newtie}{PD1}[1]{%
14650 \TextSymbolUnavailable{\newtie{#1}}#1%
14651 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

14652 % U+0009 (CHARACTER TABULATION)
14653 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
14654 % U+000A (LINE FEED)
14655 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
14656 % U+000D (CARRIAGE RETURN)
14657 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

14658 % U+02D8 BREVE; breve
14659 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
14660 % U+02C7 CARON; caron
14661 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
14662 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
14663 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
14664 % U+02D9 DOT ABOVE; dotaccent
14665 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
14666 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
14667 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
14668 % U+02DB OGONEK; ogonek
14669 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
14670 % U+02DA RING ABOVE; ring
14671 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
14672 % U+02DC SMALL TILDE; ilde, *tilde
14673 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
\040: U+0020 SPACE; *space, spacehackarabic
\041: U+0021 EXCLAMATION MARK; exclam
14674 % U+0022 QUOTATION MARK; quotedbl
14675 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
14676 % U+0023 NUMBER SIGN; numbersign
14677 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
14678 % U+0024 DOLLAR SIGN; dollar
14679 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
14680 % U+0025 PERCENT SIGN; percent
14681 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
14682 % U+0026 AMPERSAND; ampersand
14683 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
\047: U+0027 APOSTROPHE; quotesingle

```

14684 % U+0028 LEFT PARENTHESIS; parenleft
14685 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
14686 % U+0029 RIGHT PARENTHESIS; parenright
14687 \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
14688 % U+002E FULL STOP; period
14689 \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
14690 % U+003C LESS-THAN SIGN; less
14691 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
\075: U+003D EQUALS SIGN; equal
14692 % U+003E GREATER-THAN SIGN; greater
14693 \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
14694 % U+005C REVERSE SOLIDUS; backslash
14695 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
14696 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
14697 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
\135: U+005D RIGHT SQUARE BRACKET; bracketright
14698 % U+005E CIRCUMFLEX ACCENT; asciicircum
14699 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
14700 % U+005F LOW LINE; underscore
14701 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
14702 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
14703 % U+0060 GRAVE ACCENT; grave
14704 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
14705 % U+0069 LATIN SMALL LETTER I; i
14706 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
14707 % U+007B LEFT CURLY BRACKET; braceleft
14708 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B

14709 % U+007C VERTICAL LINE; *bar, verticalbar
14710 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
14711 % U+007D RIGHT CURLY BRACKET; braceright
14712 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
14713 % U+007E TILDE; asciitilde
14714 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
14715 % U+2022 BULLET; bullet
14716 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
14717 % U+2020 DAGGER; dagger
14718 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
14719 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
14720 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
14721 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
14722 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
14723 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
14724 % U+2014 EM DASH; emdash
14725 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
14726 % U+2013 EN DASH; endash
14727 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
14728 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
14729 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
14730 % U+2044 FRACTION SLASH; fraction
14731 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
14732 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
inglleft
14733 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
14734 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
inglright
14735 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
14736 % U+2212 MINUS SIGN; minus
14737 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
14738 % U+2030 PER MILLE SIGN; perthousand
14739 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
14740 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
14741 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
14742 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
14743 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
14744 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
14745 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
14746 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
14747 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
14748 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
14749 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
14750 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
14751 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
14752 % U+2122 TRADE MARK SIGN; trademark
14753 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
14754 % U+FB01 LATIN SMALL LIGATURE FI; fi
14755 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
14756 % U+FB02 LATIN SMALL LIGATURE FL; fl
14757 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
14758 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14759 \DeclareTextCommand{\L}{PD1}{\225}% U+0141

14760 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14761 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
14762 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14763 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
14764 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14765 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
14766 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
14767 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
14768 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
14769 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14770 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
14771 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14772 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
14773 % U+0153 LATIN SMALL LIGATURE OE; oe
14774 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
14775 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14776 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
14777 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
14778 \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.

14779 % U+20AC EURO SIGN; *Euro, euro
14780 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
14781 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
14782 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
14783 % U+00A2 CENT SIGN; cent
14784 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
14785 % U+00A3 POUND SIGN; sterling
14786 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
14787 % U+00A4 CURRENCY SIGN; currency
14788 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
14789 % U+00A5 YEN SIGN; yen
14790 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
14791 % U+00A6 BROKEN BAR; brokenbar
14792 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
14793 % U+00A7 SECTION SIGN; section
14794 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
14795 % U+00A8 DIAERESIS; dieresis
14796 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
14797 % U+00A9 COPYRIGHT SIGN; copyright
14798 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
14799 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
14800 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
14801 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
14802 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
14803 \DeclareTextCommand{\guillemetleft}{PD1}{\253}% U+00AB
14804 % U+00AC NOT SIGN; logicalnot
14805 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
14806 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

14807 % U+00AE REGISTERED SIGN; registered
14808 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
14809 % U+00AF MACRON; *macron, overscore

14810 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
14811 % U+00B0 DEGREE SIGN; degree
14812 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
14813 % U+00B1 PLUS-MINUS SIGN; plusminus
14814 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
14815 % U+00B2 SUPERSCRIPT TWO; twosuperior
14816 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
14817 % U+00B3 SUPERSCRIPT THREE; threesuperior
14818 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
14819 % U+00B4 ACUTE ACCENT; acute
14820 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
14821 % U+00B5 MICRO SIGN; mu, mul
14822 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
14823 % U+00B6 PILCROW SIGN; paragraph
14824 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
14825 % U+00B7 MIDDLE DOT; middot, *periodcentered
14826 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
14827 % U+00B8 CEDILLA; cedilla
14828 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
14829 % U+00B9 SUPERSCRIPT ONE; onesuperior
14830 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
14831 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14832 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
14833 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
14834 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
14835 \DeclareTextCommand{\guillemetright}{PD1}{\273}% U+00BB
14836 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14837 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
14838 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14839 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
14840 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14841 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
14842 % U+00BF INVERTED QUESTION MARK; questiondown
14843 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
14844 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14845 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
14846 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14847 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
14848 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14849 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
14850 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14851 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
14852 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14853 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
14854 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14855 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
14856 % U+00C6 LATIN CAPITAL LETTER AE; AE
14857 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
14858 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14859 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
14860 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14861 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
14862 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14863 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9

14864 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14865 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
14866 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14867 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
14868 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14869 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
14870 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14871 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
14872 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14873 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
14874 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14875 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
14876 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14877 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
14878 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14879 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14880 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14881 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14882 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14883 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14884 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14885 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14886 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14887 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14888 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14889 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14890 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
14891 % U+00D7 MULTIPLICATION SIGN; multiply
14892 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14893 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14894 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14895 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14896 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14897 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14898 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14899 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14900 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
14901 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14902 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
14903 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14904 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
14905 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
14906 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
14907 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
14908 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14909 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
14910 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14911 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
14912 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14913 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
14914 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14915 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
14916 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14917 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3

14918 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14919 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
14920 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14921 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
14922 % U+00E6 LATIN SMALL LETTER AE; ae
14923 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
14924 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14925 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
14926 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14927 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
14928 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14929 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
14930 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14931 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
14932 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14933 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
14934 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14935 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
14936 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
14937 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14938 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
14939 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
14940 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14941 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
14942 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
14943 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14944 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
14945 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
14946 % U+00F0 LATIN SMALL LETTER ETH; eth
14947 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
14948 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14949 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
14950 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14951 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
14952 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14953 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
14954 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14955 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
14956 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14957 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
14958 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14959 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
14960 % U+00F7 DIVISION SIGN; divide
14961 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
14962 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14963 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
14964 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14965 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
14966 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14967 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
14968 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14969 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
14970 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14971 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC

14972 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14973 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
14974 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
14975 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
14976 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
14977 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
14978 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
14979 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.

14980 \DeclareTextCommand{\SS}{PD1}{SS}%
14981 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)

14982 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
14983 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
14984 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
14985 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
14986 \DeclareTextCommand{\textflqq}{PD1}{\guillemetleft}%
14987 \DeclareTextCommand{\textfrqq}{PD1}{\guillemetright}%
14988 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
14989 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

Aliases (math names)

14990 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
14991 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
14992 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
14993 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
14994 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
14995 \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).

14996 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
14997 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
14998 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
14999 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15000 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15001 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15002 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15003 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15004 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15005 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15006 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15007 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15008 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15009 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

15010 </pd1enc>

46.2 PU encoding

15011 <*puenc>
15012 \DeclareFontEncoding{PU}{}{}

46.2.1 NFSS2 accents

15013 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15014 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15015 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15016 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15017 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15018 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15019 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
15020 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15021 % U+0304 COMBINING MACRON; macroncmb
15022 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15023 % U+0306 COMBINING BREVE; brevecmb
15024 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15025 \ifx\CYRDZE\@undefined \else
15026 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15027 \fi
15028 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15029 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15030 % U+0308 COMBINING DIAERESIS; dieresiscmb
15031 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15032 % U+030A COMBINING RING ABOVE; ringcmb
15033 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15034 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15035 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15036 % U+030C COMBINING CARON; caroncmb
15037 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15038 (/puenc)
15039 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15040 (puextra)\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15041 (*puenc)
15042 \ifx\CYRDZE\@undefined \else
15043 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15044 \fi
15045 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15046 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15047 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15048 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
15049 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15050 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
laut (tipa)
15051 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15052 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15053 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15054 % U+0327 COMBINING CEDILLA; cedillacmb
15055 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15056 % U+0328 COMBINING OGONEK; ogonekcmb
15057 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15058 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15059 % \textsubcircum (tipa)
15060 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15061 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15062 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15063 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15064 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15065 % U+0331 COMBINING MACRON BELOW; macronbelowcmb

15066 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15067 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
15068 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15069 % U+20DD COMBINING ENCLOSING CIRCLE
15070 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

15071 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15072 \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.

15073 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
15074 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
15075 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
15076 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15077 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15078 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
15079 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15080 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15081 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
15082 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
15083 (/puenc)
15084 (puextra)\DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
15085 (*puenc)
15086 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
15087 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
15088 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
15089 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\83\021}}% U+0311
15090 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\83\044}}% U+0324
15091 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
15092 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircumlow}%
15093 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\83\056}}% U+032E
15094 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%
15095 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
15096 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
15097 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
15098 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
15099 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
15100 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\83\001\83\004}}% U+0301 U
15101 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\83\000\83\004}}% U+0300 U
15102 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
15103 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
15104 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
15105 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
15106 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
15107 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
15108 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
15109 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
15110 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
15111 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
15112 (/puenc)
15113 (puextra)\DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%

15114 (*puenc)
15115 \DeclareTextCompositeCommand{\=} {PU}{\ }{\textasciimacron}%
15116 \DeclareTextCompositeCommand{\H} {PU}{\ }{\texthungarumlaut}%
15117 \DeclareTextCompositeCommand{\k} {PU}{\ }{\textogonek}%
15118 \DeclareTextCompositeCommand{\textinvbreve} {PU}{\ }{\{\ \83\021\}}% U+0311
15119 \DeclareTextCompositeCommand{\textsubumlaut} {PU}{\ }{\{\ \83\044\}}% U+0324
15120 \DeclareTextCompositeCommand{\textsubring} {PU}{\ }{\textringlow}%
15121 \DeclareTextCompositeCommand{\textsubcircum} {PU}{\ }{\textcircumlow}%
15122 \DeclareTextCompositeCommand{\textsubbreve} {PU}{\ }{\{\ \83\056\}}% U+032E
15123 \DeclareTextCompositeCommand{\textsubtilde} {PU}{\ }{\texttildelow}%
15124 \DeclareTextCompositeCommand{\b} {PU}{\ }{\textmacronbelow}%
15125 \DeclareTextCompositeCommand{\d} {PU}{\ }{\textdotbelow}%
15126 \DeclareTextCompositeCommand{\t} {PU}{\ }{\texttie}%
15127 \DeclareTextCompositeCommand{\newtie} {PU}{\ }{\textnewtie}%
15128 \DeclareTextCompositeCommand{\textcircled} {PU}{\ }{\textbigcircle}%
15129 \DeclareTextCompositeCommand{\textacutemacron} {PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
15130 \DeclareTextCompositeCommand{\textgravemacron} {PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)

15131 \DeclareTextCommand{\capitalcedilla} {PU}[1]{\c{#1}}%
15132 \DeclareTextCommand{\capitalogonek} {PU}[1]{\k{#1}}%
15133 \DeclareTextCommand{\capitalgrave} {PU}[1]{\`{#1}}%
15134 \DeclareTextCommand{\capitalacute} {PU}[1]{\'{#1}}%
15135 \DeclareTextCommand{\capitalcircumflex} {PU}[1]{\^{#1}}%
15136 \DeclareTextCommand{\capitaltilde} {PU}[1]{\~{#1}}%
15137 \DeclareTextCommand{\capitaldieresis} {PU}[1]{\"{#1}}%
15138 \DeclareTextCommand{\capitalhungarumlaut} {PU}[1]{\H{#1}}%
15139 \DeclareTextCommand{\capitalring} {PU}[1]{\r{#1}}%
15140 \DeclareTextCommand{\capitalcaron} {PU}[1]{\v{#1}}%
15141 \DeclareTextCommand{\capitalbreve} {PU}[1]{\u{#1}}%
15142 \DeclareTextCommand{\capitalmacron} {PU}[1]{\={#1}}%
15143 \DeclareTextCommand{\capitaldotaccent} {PU}[1]{\.{#1}}%
15144 \DeclareTextCommand{\capitaltie} {PU}[1]{\t{#1}}%
15145 \DeclareTextCommand{\capitalnewtie} {PU}[1]{\newtie{#1}}%

46.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

15146 % U+0009 (CHARACTER TABULATION)
15147 \DeclareTextCommand{\textHT} {PU}{\80\011}% U+0009
15148 % U+000A (LINE FEED)
15149 \DeclareTextCommand{\textLF} {PU}{\80\012}% U+000A
15150 % U+000D (CARRIAGE RETURN)
15151 \DeclareTextCommand{\textCR} {PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
15152 % U+0022 QUOTATION MARK; quotedbl
15153 \DeclareTextCommand{\textquotedbl} {PU}{"}% \80\042 U+0022
15154 % U+0023 NUMBER SIGN; numbersign
15155 \DeclareTextCommand{\textnumbersign} {PU}{\80\043}% U+0023
15156 % U+0024 DOLLAR SIGN; dollar
15157 \DeclareTextCommand{\textdollar} {PU}{\80\044}% U+0024
15158 %* \textdollar -> \mathdollar
15159 %* \textdollar -> \EyesDollar (marvosym)
15160 % U+0025 PERCENT SIGN; percent

15161 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
15162 % U+0026 AMPERSAND; ampersand
15163 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
15164 %* \textampersand -> \binampersand (stmaryrd)
15165 %* \textampersand -> \with (cml)
15166 % U+0027 APOSTROPHE; quotesingle
15167 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
15168 % U+0028 LEFT PARENTHESIS; parenleft
15169 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
15170 % U+0029 RIGHT PARENTHESIS; parenright
15171 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
15172 % U+002A ASTERISK; asterisk; (?)
15173 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
15174 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
15175 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
15176 % U+002C COMMA; comma; \MVComma (marvosym)
15177 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
15178 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
15179 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
15180 % U+002E FULL STOP; period; \MVPeriod (marvosym)
15181 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
15182 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
15183 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
15184 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
15185 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
15186 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
15187 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
15188 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
15189 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
15190 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
15191 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
15192 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
15193 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
15194 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
15195 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
15196 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
15197 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
15198 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
15199 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
15200 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
15201 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
15202 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
15203 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039

\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon

15204 % U+003C LESS-THAN SIGN; less
15205 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

15206 % U+003E GREATER-THAN SIGN; greater
15207 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E

\80\077: U+003F QUESTION MARK; question

15208 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)


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15209 \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
15210 % U+005C REVERSE SOLIDUS; backslash
15211 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
\80\135: U+005D RIGHT SQUARE BRACKET; bracketright
15212 % U+005E CIRCUMFLEX ACCENT; asciicircum
15213 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
15214 % U+005F LOW LINE; underscore
15215 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
15216 %* \textunderscore -> \mathunderscore (LaTeX)
15217 % U+0060 GRAVE ACCENT; grave
15218 \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
15219 % U+0069 LATIN SMALL LETTER I; i
15220 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% \80\151 U+0069
15221 \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
15222 % U+007B LEFT CURLY BRACKET; braceleft
15223 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
15224 % U+007C VERTICAL LINE; *bar, verticalbar
15225 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
15226 %* \textbar -> \textvbar (tipa)
15227 % U+007D RIGHT CURLY BRACKET; braceright
15228 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
15229 % U+007E TILDE; asciitilde
15230 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

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46.2.3 Latin-1 Supplement: U+0080 to U+00FF

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\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
15231 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15232 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
15233 % U+00A2 CENT SIGN; cent
15234 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
15235 % U+00A3 POUND SIGN; sterling
15236 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
15237 %* \textsterling -> \mathsterling (LaTeX)
15238 %* \textsterling -> \pounds (LaTeX)
15239 % U+00A4 CURRENCY SIGN; currency
15240 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
15241 % U+00A5 YEN SIGN; yen
15242 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
15243 % U+00A6 BROKEN BAR; brokenbar
15244 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6

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15245 %* \textbrokenbar -> \brokenvert (wasysym)
15246 % U+00A7 SECTION SIGN; section
15247 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
15248 %* \textsection -> \mathsection (LaTeX)
15249 %* \textsection -> \S (LaTeX)
15250 % U+00A8 DIAERESIS; dieresis
15251 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
15252 % U+00A9 COPYRIGHT SIGN; copyright
15253 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
15254 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15255 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
15256 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetleft
15257 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
15258 \DeclareTextCommand{\guillemetleft}{PU}{\80\253}% U+00AB
15259 % U+00AC NOT SIGN; logicalnot
15260 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
15261 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
15262 % U+00AE REGISTERED SIGN; registered
15263 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
15264 % U+00AF MACRON; *macron, overscore
15265 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
15266 % U+00B0 DEGREE SIGN; degree
15267 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
15268 % U+00B1 PLUS-MINUS SIGN; plusminus
15269 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
15270 % U+00B2 SUPERSCRIPT TWO; twosuperior
15271 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
15272 % U+00B3 SUPERSCRIPT THREE; threesuperior
15273 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
15274 % U+00B4 ACUTE ACCENT; acute
15275 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
15276 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
15277 % U+00B5 MICRO SIGN; mu, mu1
15278 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
15279 % U+00B6 PILCROW SIGN; paragraph
15280 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
15281 %* \textparagraph -> \mathparagraph (LaTeX)
15282 % U+00B7 MIDDLE DOT; middot, *periodcentered
15283 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
15284 %* \textperiodcentered -> \MultiplicationDot (marvosym)
15285 %* \textperiodcentered -> \Squaredot (marvosym)
15286 % U+00B8 CEDILLA; cedilla
15287 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
15288 % U+00B9 SUPERSCRIPT ONE; onesuperior
15289 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
15290 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15291 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
15292 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemetright
15293 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
15294 \DeclareTextCommand{\guillemetright}{PU}{\80\273}% U+00BB
15295 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15296 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
15297 % U+00BD VULGAR FRACTION ONE HALF; onehalf

15298 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
15299 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15300 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
15301 % U+00BF INVERTED QUESTION MARK; questiondown
15302 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
15303 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15304 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
15305 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15306 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
15307 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15308 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
15309 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15310 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
15311 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15312 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
15313 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15314 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
15315 % U+00C6 LATIN CAPITAL LETTER AE; AE
15316 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
15317 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15318 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
15319 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15320 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
15321 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15322 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
15323 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15324 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
15325 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15326 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
15327 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15328 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
15329 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15330 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
15331 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15332 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
15333 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15334 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
15335 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15336 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
15337 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15338 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15339 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15340 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
15341 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15342 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15343 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15344 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15345 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15346 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15347 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15348 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
15349 % U+00D7 MULTIPLICATION SIGN; multiply
15350 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15351 %* \textmultiply -> \vartimes (stmaryrd)

15352 %* \textmultiply -> \MVMultiplication (marvosym)
15353 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15354 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15355 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15356 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
15357 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15358 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15359 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15360 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15361 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15362 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
15363 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15364 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15365 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15366 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15367 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
15368 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15369 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15370 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15371 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
15372 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15373 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15374 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15375 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15376 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15377 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15378 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15379 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
15380 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15381 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15382 % U+00E6 LATIN SMALL LETTER AE; ae
15383 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15384 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15385 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15386 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15387 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15388 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15389 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15390 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15391 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15392 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15393 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
15394 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15395 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
15396 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\354}% U+00EC
15397 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15398 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
15399 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\355}% U+00ED
15400 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15401 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15402 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
15403 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15404 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
15405 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\357}% U+00EF

15406 % U+00F0 LATIN SMALL LETTER ETH; eth
15407 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
15408 %* \dh -> \eth (wsuipa, phonetic)
15409 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15410 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
15411 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15412 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
15413 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15414 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
15415 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15416 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
15417 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15418 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
15419 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15420 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
15421 % U+00F7 DIVISION SIGN; divide
15422 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
15423 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15424 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
15425 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15426 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
15427 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15428 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
15429 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15430 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
15431 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15432 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
15433 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15434 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
15435 % U+00FE LATIN SMALL LETTER THORN; thorn;
15436 % \th, \thorn (wasysym), \textthorn (tipa)
15437 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
15438 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
15439 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15440 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

46.2.4 Latin Extended-A: U+0080 to U+017F

15441 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
15442 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
15443 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
15444 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
15445 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
15446 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
15447 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
15448 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
15449 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
15450 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
15451 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
15452 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
15453 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
15454 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
15455 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
15456 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107

15457 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
15458 \DeclareTextCompositeCommand{\~}{PU}{C}{\81\010}% U+0108
15459 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
15460 \DeclareTextCompositeCommand{\~}{PU}{c}{\81\011}% U+0109
15461 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
cent
15462 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15463 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15464 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15465 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15466 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15467 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15468 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15469 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15470 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15471 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15472 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
15473 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15474 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
15475 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
15476 % \textcrd (tipa)
15477 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
15478 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
15479 %* \textcrd -> \crossd (wsuipa)
15480 % An alternate glyph with the stroke through the bowl:
15481 %* \textcrd -> \textbard (tipa)
15482 %* \textcrd -> \bard (wsuipa)
15483 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15484 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
15485 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15486 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
15487 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15488 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15489 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15490 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15491 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15492 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15493 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15494 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15495 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15496 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15497 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15498 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15499 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15500 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15501 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15502 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15503 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15504 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15505 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15506 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15507 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15508 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15509 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve

15510 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15511 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
15512 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
15513 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15514 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
15515 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
15516 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15517 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15518 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15519 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15520 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15521 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15522 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15523 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15524 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
15525 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
15526 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
15527 %* \texthbar -> \textcrh (tipa)
15528 %* \texthbar -> \crossh (wsuipa)
15529 %* \texthbar -> \planck (phonetic)
15530 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15531 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15532 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15533 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15534 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15535 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15536 \DeclareTextCompositeCommand{\=} {PU}{I}{\81\052}% U+012A
15537 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15538 \DeclareTextCompositeCommand{\=} {PU}{i}{\81\053}% U+012B
15539 \DeclareTextCompositeCommand{\=} {PU}{i}{\81\053}% U+012B
15540 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15541 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
15542 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15543 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15544 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15545 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
15546 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
15547 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
15548 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15549 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15550 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
15551 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
15552 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15553 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
15554 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
15555 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
15556 % U+0133 LATIN SMALL LIGATURE IJ; ij
15557 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
15558 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
15559 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
15560 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
15561 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135

15562 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 15563 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 15564 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 15565 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 15566 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has chosen `\textkra`.

15567 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 15568 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 15569 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 15570 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 15571 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 15572 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 15573 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 15574 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 15575 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 15576 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 15577 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 15578 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 15579 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 15580 \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`.

15581 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 15582 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 15583 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 15584 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 15585 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15586 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 15587 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15588 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 15589 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 15590 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 15591 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 15592 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 15593 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 15594 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 15595 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 15596 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 15597 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 15598 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 15599 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 15600 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 15601 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 15602 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 15603 % U+014A LATIN CAPITAL LETTER ENG; Eng

15604 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15605 % U+014B LATIN SMALL LETTER ENG; eng
15606 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15607 %* \ng -> \eng (wsuipa)
15608 %* \ng -> \engma (phonetic)
15609 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15610 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
15611 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15612 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
15613 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15614 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
15615 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15616 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
15617 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
15618 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
15619 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
15620 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
15621 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15622 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
15623 % U+0153 LATIN SMALL LIGATURE OE; oe
15624 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
15625 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
15626 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
15627 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
15628 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
15629 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
15630 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
15631 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
15632 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
15633 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
15634 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
15635 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
15636 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
15637 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
15638 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
15639 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
15640 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
15641 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
15642 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
15643 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
15644 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
15645 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
15646 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
15647 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
15648 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
15649 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15650 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
15651 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15652 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
15653 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent

15654 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
15655 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
15656 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
15657 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
15658 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
15659 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
15660 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
15661 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
15662 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
15663 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
15664 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
15665 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
15666 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
15667 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
15668 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
15669 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
15670 \DeclareTextCompositeCommand{\=} {PU}{U}{\81\152}% U+016A
15671 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
15672 \DeclareTextCompositeCommand{\=} {PU}{u}{\81\153}% U+016B
15673 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
15674 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
15675 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
15676 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
15677 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
15678 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
15679 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
15680 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
15681 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
15682 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
15683 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
15684 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
15685 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
15686 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
15687 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
15688 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
15689 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
15690 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
15691 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
15692 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
15693 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
15694 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
15695 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
15696 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
15697 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15698 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
15699 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
15700 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
15701 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
15702 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
15703 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
15704 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
15705 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent

15706 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 15707 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15708 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 15709 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15710 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 15711 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 15712 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

46.2.5 Latin Extended-B: U+0180 to U+024F

15713 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 15714 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 15715 %* \textcrb -> \crossb (wsuipa)
 15716 % An alternate glyph with the stroke through the bowl:
 15717 %* \textcrb -> \textbarb (tipa)
 15718 %* \textcrb -> \barb (wsuipa)
 15719 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausaB (pho-
 netic)
 15720 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
 15721 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 15722 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 15723 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausaD (pho-
 netic)
 15724 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A
 15725 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
 15726 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
 15727 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
 15728 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15729 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 15730 %* \textflorin -> \Florin (marvosym)
 15731 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
 15732 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
 15733 %* \texthvlig -> \hv (wsuipa)
 15734 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausaK (pho-
 netic)
 15735 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198
 15736 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
 15737 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
 15738 %* \texthtk -> \hausak (phonetic)
 15739 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
 15740 % \textbarl (tipa), \barl (wsuipa)
 15741 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
 15742 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
 15743 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
 15744 % \textcrlambda (tipa)
 15745 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
 15746 %* \textcrlambda -> \crossnilambda (wsuipa)
 15747 %* \textcrlambda -> \barlambda (phonetic)
 15748 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
 15749 %* \textcrlambda -> \lambdash (txfonts/pxfonts)
 15750 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nletright-
 long;
 15751 % \textnrleg (tipx)
 15752 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
 15753 %* \textPUnrleg -> \textnrleg (tipx)

15754 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
15755 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
15756 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
15757 % \textlhookt (tipa)
15758 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
15759 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
15760 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
15761 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
15762 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
15763 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
15764 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
15765 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
15766 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
15767 % glottalinvertedstroke; \textcrinvglotstop (tipa)
15768 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
15769 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
15770 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
15771 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
15772 % \textpipe (tipa)
15773 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
15774 %* \textpipe -> \textpipevar (tipx)
15775 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
15776 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
15777 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
15778 %* \textdoublepipe -> \textdoublepipevar (tipx)
15779 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
15780 % clickalveolar; \textdoublebarpipe (tipa)
15781 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
15782 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
15783 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
15784 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
15785 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
15786 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
15787 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
15788 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
15789 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
15790 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15791 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
15792 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
15793 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
15794 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
15795 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
15796 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
15797 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
15798 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
15799 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
15800 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
15801 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
15802 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
15803 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
15804 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
15805 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5

15806 %* \textgslash -> \textcrg (tipa)
15807 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
15808 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
15809 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
15810 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
15811 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
15812 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
15813 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
15814 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
15815 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
15816 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
15817 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
15818 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
15819 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
15820 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
15821 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
15822 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
15823 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
15824 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
15825 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
15826 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
15827 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
15828 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
15829 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
15830 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
15831 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
15832 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
15833 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
15834 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
15835 % *Oslashacute, Ostrokeacut
15836 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
15837 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
15838 % *oslashacute, ostrokeacut
15839 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
15840 </puenc>
15841 (*puextra)
15842 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
15843 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
15844 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
15845 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
15846 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
15847 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
15848 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
15849 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
15850 </puextra>
15851 (*puenc)
15852 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
15853 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
15854 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
15855 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
15856 </puenc>
15857 (*puextra)

15858 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
15859 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
15860 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
15861 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15862 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
15863 \puextra
15864 (*puenc)
15865 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
15866 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
15867 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
15868 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15869 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
15870 \puenc
15871 (*puextra)
15872 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
15873 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
15874 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
15875 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
15876 \puextra
15877 (*puenc)
15878 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinverted-
edbreve
15879 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
15880 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
15881 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
15882 \puenc
15883 (*puextra)
15884 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
15885 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
15886 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
15887 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
15888 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
15889 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
15890 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
15891 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
15892 \puextra
15893 (*puenc)
15894 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinverted-
edbreve
15895 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
15896 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
15897 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
15898 % U+021E LATIN CAPITAL LETTER H WITH CARON
15899 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
15900 % U+021F LATIN SMALL LETTER H WITH CARON
15901 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
15902 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
15903 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
15904 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
15905 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225

15906 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
15907 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
15908 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
15909 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
15910 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
15911 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
15912 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
15913 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
15914 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
15915 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
15916 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
15917 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
15918 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
15919 \DeclareTextCompositeCommand{\=} {PU}{Y}{\82\062}% U+0232
15920 % U+0233 LATIN SMALL LETTER Y WITH MACRON
15921 \DeclareTextCompositeCommand{\=} {PU}{y}{\82\063}% U+0233
15922 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
15923 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
15924 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
15925 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
15926 % U+0237 LATIN SMALL LETTER DOTLESS J
15927 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
15928 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
15929 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
15930 %* \textPUdblig -> \textdblig (tipx)
15931 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
15932 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
15933 %* \textPUqplig -> \textqplig (tipx)
15934 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
15935 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
15936 %* \textslashc -> \textcentoldstyle (textcomp)
15937 % With bar instead of stroke:
15938 %* \textslashc -> \textbarc (tipa)

46.2.6 IPA Extensions: U+0250 to U+02AF

15939 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
15940 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
15941 %* \textturna -> \inva (wasysym)
15942 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
15943 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
15944 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
15945 %* \textscripta -> \vara (phonetic)
15946 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
15947 % \textturnscripta (tipa)
15948 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
15949 %* \textturnscripta -> \invscripta (wsuipa)
15950 %* \textturnscripta -> \rotvara (phonetic)
15951 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
15952 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
15953 %* \texthtb -> \hookb (wsuipa)
15954 %* \texthtb -> \hausab (phonetic)
15955 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
15956 % \textopeno (tipa), \openo (wasysym)
15957 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254

15958 %* \textopeno -> \varopeno (phonetic)
15959 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
15960 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
15961 %* \textctc -> \curlyc (wsuipa)
15962 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
15963 \DeclareTextCommand{\textrtaild}{PU}{\82\126}% U+0256
15964 %* \textrtaild -> \taild (wsuipa)
15965 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
15966 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
15967 %* \texthtd -> \hookd (wsuipa)
15968 %* \texthtd -> \hausad (phonetic)
15969 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
15970 % \textreve (tipa), \reve (wsuipa)
15971 \DeclareTextCommand{\textreve}{PU}{\82\130}% U+0258
15972 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
15973 % \textschwa (tipa), \schwa (wsuipa, phonetic)
15974 \DeclareTextCommand{\textschwa}{PU}{\82\131}% U+0259
15975 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
15976 % \textrhookschwa (tipa)
15977 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
15978 %* \textrhookschwa -> \er (wsuipa)
15979 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
SILON; eopen;
15980 % \niepsilon (wsuipa)
15981 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}% U+025B
15982 %* \textniepsilon -> \epsi (phonetic)
15983 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
15984 % \textrepsilon (tipa), \repsilon (wsuipa)
15985 \DeclareTextCommand{\textrepsilon}{PU}{\82\134}% U+025C
15986 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
reversedhook;
15987 % \textrhookrepsilon (tipa)
15988 \DeclareTextCommand{\textrhookrepsilon}{PU}{\82\135}% U+025D
15989 %* \textrhookrepsilon -> \hookrepsilon (wsuipa)
15990 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
versedclosed;
15991 % \textcloserepsilon (tipa)
15992 \DeclareTextCommand{\textcloserepsilon}{PU}{\82\136}% U+025E
15993 %* \textcloserepsilon -> \closedrepsilon (wsuipa)
15994 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
lessstroke;
15995 % \textbardotlessj (tipa)
15996 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
15997 %* \textbardotlessj -> \barj (phonetic)
15998 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
15999 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16000 %* \texthtg -> \hookg (wsuipa)
16001 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16002 % \textscriptg (tipa), \scriptg (wsuipa)
16003 \DeclareTextCommand{\textscriptg}{PU}{\82\141}% U+0261
16004 %* \textscriptg -> \varg (phonetic)
16005 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16006 \DeclareTextCommand{\textscg}{PU}{\82\142}% U+0262
16007 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;

16008 % \ipagamma (wsuipa), \vod (phonetic)
16009 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16010 %* \textipagamma -> \vod (pnonetic)
16011 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16012 % \babygamma (wsuipa)
16013 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16014 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16015 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16016 %* \textturnh -> \invh (wsuipa)
16017 %* \textturnh -> \udesc (phonetic)
16018 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16019 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16020 %* \texthth -> \hookh (wsuipa)
16021 %* \texthth -> \voicedh (phonetic)
16022 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
ththeng (tipa)
16023 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16024 %* \texththeng -> \hookheng (wsuipa)
16025 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16026 % \textbari (tipa), \bari (wsuipa)
16027 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16028 %* \textbari -> \ibar (phonetic)
16029 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
16030 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
16031 %* \textniiota -> \vari (phonetic)
16032 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16033 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16034 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16035 % \textltilde (tipa)
16036 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16037 %* \textltilde -> \tildel (wsuipa)
16038 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16039 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16040 %* \textbeltl -> \latfrc (wsuipa)
16041 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16042 % lhookretroflex; \textrtaill (tipa)
16043 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16044 %* \textrtaill -> \taill (wsuipa)
16045 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16046 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16047 %* \textlyoghlig -> \lz (wsuipa)
16048 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16049 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16050 %* \textturnm -> \invm (wsuipa)
16051 %* \textturnm -> \rotm (phonetic)
16052 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16053 % \textturnmrleg (tipa)
16054 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16055 %* \textturnmrleg -> \legm (wsuipa)
16056 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16057 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16058 %* \textltailm -> \labdentalnas (wsuipa)
16059 %* \textltailm -> \emgma (phonetic)

16060 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
16061 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16062 %* \textltailn -> \nj (wsuipa)
16063 %* \textltailn -> \enya (phonetic)
16064 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16065 % nhookretroflex; \textrtailn (tipa)
16066 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16067 %* \textrtailn -> \tailn (wsuipa)
16068 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16069 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16070 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16071 % LATIN CAPITAL LETTER BARRED O; obarred;
16072 % \textbaro (tipa), \baro (wsuipa)
16073 % But \baro from stmaryrd is different!
16074 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16075 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscoeelig (tipa)
16076 \DeclareTextCommand{\textscoeelig}{PU}{\82\166}% U+0276
16077 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16078 % \textcloseomega (tipa)
16079 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16080 %* \textcloseomega -> \closedniomega (wsuipa)
16081 %* \textcloseomega -> \varomega (phonetic)
16082 % U+0278 LATIN SMALL LETTER PHI; philatin; \nipher (wsuipa)
16083 \DeclareTextCommand{\textnipher}{PU}{\82\170}%* U+0278
16084 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16085 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16086 %* \textturnr -> \invr (wsuipa)
16087 %* \textturnr -> \rotr (phonetic)
16088 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16089 % rlonglegturned; \textturnrlongleg (tipa)
16090 \DeclareTextCommand{\textturnrlongleg}{PU}{\82\172}% U+027A
16091 %* \textturnrlongleg -> \invleg (wsuipa)
16092 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
16093 % \textturnrrtail (tipa)
16094 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16095 %* \textturnrrtail -> \tailinvr (wsuipa)
16096 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-
gleg (tipa)
16097 \DeclareTextCommand{\textlongleg}{PU}{\82\174}%* U+027C
16098 %* \textlongleg -> \leg (wsuipa)
16099 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
16100 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16101 %* \textrtailr -> \tailr (wsuipa)
16102 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16103 % \textfishhook (tipa)
16104 \DeclareTextCommand{\textfishhook}{PU}{\82\176}% U+027E
16105 %* \textfishhook -> \flapr (wsuipa)
16106 %* \textfishhook -> \flap (phonetic)
16107 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfish-
hookreversed;
16108 % \textlhtlongi (tipa)
16109 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
16110 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)

16111 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
16112 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
16113 % \textinvscr (tipa), \invscr (wsuipa)
16114 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
16115 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
16116 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
16117 %* \textrtails -> \tails (wsuipa)
16118 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
16119 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
16120 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
16121 % dotlessjstrokehook; \texthtbardotlessj (tipa)
16122 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
16123 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatre-
versed;
16124 % \textvibyi (tipa)
16125 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
16126 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
16127 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
16128 %* \textctesh -> \curlyesh (wsuipa)
16129 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
16130 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
16131 %* \textturnt -> \clickt (wsuipa)
16132 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
hook;
16133 % \texttrtailt (tipa)
16134 \DeclareTextCommand{\texttrtailt}{PU}{\82\210}% U+0288
16135 %* \texttrtailt -> \tailt (wsuipa)
16136 % U+0289 LATIN SMALL LETTER U BAR; ubar;
16137 % \textbaru (tipa), \baru (wsuipa)
16138 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
16139 %* \textbaru -> \ubar (phonetic)
16140 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
16141 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
16142 %* \textniupsilon -> \rotOmega (phonetic)
16143 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
TER SCRIPT V;
16144 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
16145 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
16146 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
16147 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
16148 %* \textturnv -> \invv (wsuipa)
16149 %* \textturnv -> \pwedge (phonetic)
16150 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
16151 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
16152 %* \textturnw -> \invw (wsuipa)
16153 %* \textturnw -> \rotw (phonetic)
16154 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
16155 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
16156 %* \textturny -> \invy (wsuipa)
16157 %* \textturny -> \roty (phonetic)
16158 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
16159 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
16160 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-
hook;

16161 % \textrtailz (tipa)
16162 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
16163 %* \textrtailz -> \tailz (wsuipa)
16164 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
16165 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
16166 %* \textctz -> \curlyz (wsuipa)
16167 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
16168 % \textyogh (tipa), \yogh (wsuipa)
16169 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
16170 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LET-
TER YOGH CURL;
16171 % ezhcurl; \textctyogh (tipa)
16172 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
16173 %* \textctyogh -> \curlyyogh (wsuipa)
16174 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
16175 % \textglotstop (tipa), \glotstop (wsuipa)
16176 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
16177 %* \textglotstop -> \ejective (wsuipa)
16178 %* \textglotstop -> \glottal (phonetic)
16179 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
16180 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
16181 % \textrevglotstop (tipa), \revglotstop (wsuipa)
16182 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
16183 %* \textrevglotstop -> \reveject (wsuipa)
16184 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
16185 % \textinvglotstop (tipa), \invglotstop (wsuipa)
16186 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
16187 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
16188 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
16189 %* \textstretchc -> \clickc (wsuipa)
16190 %* \textstretchc -> \textstretchcvar (tipx)
16191 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
16192 % \textbullseye (tipa)
16193 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
16194 %* \textbullseye -> \clickb (wsuipa)
16195 %* \textbullseye -> \textObullseye (tipx)
16196 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
16197 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
16198 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
16199 % \textcloseepsilon (tipa)
16200 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
16201 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
16202 % \texthtscg (tipa)
16203 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
16204 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
16205 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
16206 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossed-
tail; \textcdj (tipa)
16207 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
16208 %* \textctj -> \textctjvar (tipx)
16209 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
16210 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
16211 %* \textturnk -> \textturnsck (tipx)
16212 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)

16213 \DeclareTextCommand{\textsc1}{PU}{\82\237}% U+029F
16214 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
16215 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
16216 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
16217 % \textbarglotstop (tipa)
16218 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
16219 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
16220 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
16221 % \textbarrevglotstop (tipa)
16222 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
16223 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
16224 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
16225 %* \textdzlig -> \dz (wsupipa)
16226 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
lig (tipa)
16227 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
16228 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
16229 % \textdctzlig (tipa)
16230 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
16231 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
16232 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
16233 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
16234 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
16235 %* \textteshlig -> \tesh (wsuipa)
16236 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
16237 % \texttctclig (tipa)
16238 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
16239 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
16240 % \textlhtlongy (tipa)
16241 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
16242 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
16243 % \textvibyy (tipa)
16244 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

46.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

16245 % U+02BD MODIFIER LETTER REVERSED COMMA;
16246 % commareversedmod, afi64937; \textrevapostrophe (tipa)
16247 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
16248 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
16249 % \textraiseglotstop (tipa)
16250 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
16251 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
16252 % \textlptr (tipa)
16253 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
16254 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
16255 % \textrptr (tipa)
16256 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
16257 % U+02C7 CARON; caron
16258 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
16259 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticalinmod;
16260 % \textprimstress (tipa)
16261 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8

16262 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; `verticallinelowmod`;
16263 % `\textsecstress` (tipa)
16264 `\DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC`
16265 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; `colontriangularmod`;
16266 % `\textlengthmark` (tipa)
16267 `\DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0`
16268 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; `colontriangularhalfmod`;
16269 % `\texthalflength` (tipa)
16270 `\DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1`
16271 % U+02D8 BREVE; `breve`
16272 `\DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8`
16273 % U+02D9 DOT ABOVE; `dotaccent`
16274 `\DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9`
16275 % U+02DA RING ABOVE; `ring`
16276 `\DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA`
16277 % U+02DB OGONEK; `ogonek`
16278 `\DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB`
16279 % U+02DC SMALL TILDE; `ilde`, `*tilde`
16280 `\DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC`
16281 % U+02DD DOUBLE ACUTE ACCENT; `hungarumlaut`
16282 `\DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD`
16283 `\DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD`
16284 % U+02F3 MODIFIER LETTER LOW RING
16285 `\DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3`
16286 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
16287 `\DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5`
16288 % U+02F7 MODIFIER LETTER LOW TILDE
16289 `\DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7`
16290 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; `\textopencorner` (tipa)
16291 `\DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9`
16292 % U+02FA MODIFIER LETTER END HIGH TONE; `\textcorner` (tipa)
16293 `\DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA`

46.2.8 Combining Diacritical Marks: U+0300 to U+036F

16294 % U+030F COMBINING DOUBLE GRAVE ACCENT; `dblgravecmb`
16295 `\DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F`
16296 % U+0311 COMBINING INVERTED BREVE; `breveinvertedcmb`
16297 `\DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311`
16298 % U+0323 COMBINING DOT BELOW; `dotbelowcmb`, `*dotbelowcomb`
16299 `\DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323`
16300 % U+0331 COMBINING MACRON BELOW; `macronbelowcmb`
16301 `\DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331`
16302 % U+0361 COMBINING DOUBLE INVERTED BREVE; `breveinverteddoublecmb`
16303 `\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.

```
16304 \ifx\textBeta\@undefined \else
16305 \input{puenc-greek.def}
16306 \fi
16307 \end{puenc}
```

46.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vov@vov.vsu.ru) for the help with the Cyrillic glyph names. Cyrillic only loaded if \CYRDZE is defined.

```
16308 (*puenc)
16309 \ifx\CYRDZE\@undefined \else
16310 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
16311 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
16312 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
16313 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
16314 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
16315 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
16316 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
16317 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
16318 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
16319 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
16320 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
16321 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
16322 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
16323 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
16324 % Icyrillic, *afii10055
16325 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
16326 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
16327 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
16328 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
16329 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
16330 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
16331 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
16332 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
16333 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
16334 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
16335 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
16336 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
16337 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
16338 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
16339 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
16340 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
16341 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
16342 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
16343 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
16344 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
16345 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
16346 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
16347 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
16348 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
16349 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
16350 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
16351 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
16352 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
16353 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
16354 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
16355 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
16356 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
16357 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
```

16358 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
16359 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
16360 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
16361 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
16362 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
16363 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
16364 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
16365 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
16366 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
16367 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
16368 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
16369 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
16370 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
16371 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
16372 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
16373 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
16374 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
16375 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
16376 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
16377 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
16378 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
16379 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
16380 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
16381 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
16382 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
16383 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
16384 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
16385 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
16386 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
16387 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
16388 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
16389 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
16390 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
16391 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
16392 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
16393 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
16394 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
16395 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
16396 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
16397 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
16398 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
16399 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
16400 % Hardsigncyrillic, *afii10044
16401 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
16402 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
16403 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
16404 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
16405 % Softsigncyrillic, *afii10046
16406 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
16407 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
16408 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
16409 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
16410 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
16411 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049

16412 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
16413 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
16414 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
16415 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
16416 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
16417 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
16418 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
16419 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
16420 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
16421 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
16422 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
16423 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
16424 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
16425 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
16426 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
16427 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
16428 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
16429 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
16430 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
16431 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
16432 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
16433 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
16434 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
16435 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
16436 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
16437 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
16438 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
16439 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
16440 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
16441 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
16442 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
16443 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
16444 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
16445 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
16446 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
16447 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
16448 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
16449 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
16450 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
16451 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
16452 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
16453 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
16454 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
16455 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
16456 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
16457 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
16458 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
16459 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
16460 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
16461 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
16462 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
16463 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
16464 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
16465 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449

16466 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
16467 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
16468 %* \cyrhrdsn -> \hardsign (tipa)
16469 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
16470 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
16471 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
16472 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C
16473 %* \cyrsoftsn -> \softsign (tipa)
16474 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
16475 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
16476 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
16477 \DeclareTextCommand{\cyreru}{PU}{\84\116}% U+044E
16478 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
16479 \DeclareTextCommand{\cyrerya}{PU}{\84\117}% U+044F
16480 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
16481 \DeclareTextCompositeCommand{\`}{PU}{\cyr}{\84\120}% U+0450
16482 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
16483 \DeclareTextCommand{\cyrjo}{PU}{\84\121}% U+0451
16484 \DeclareTextCompositeCommand{\"}{PU}{\cyr}{\84\121}% U+0451
16485 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
16486 \DeclareTextCommand{\cyrjdje}{PU}{\84\122}% U+0452
16487 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
16488 \DeclareTextCompositeCommand{\'}{PU}{\cyrjg}{\84\123}% U+0453
16489 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
16490 \DeclareTextCommand{\cyrjie}{PU}{\84\124}% U+0454
16491 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
16492 \DeclareTextCommand{\cyrjdze}{PU}{\84\125}% U+0455
16493 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
16494 % *afii10103, icyrillic
16495 \DeclareTextCommand{\cyrjii}{PU}{\84\126}% U+0456
16496 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
16497 \DeclareTextCommand{\cyrjyi}{PU}{\84\127}% U+0457
16498 \DeclareTextCompositeCommand{\"}{PU}{\cyrjii}{\84\127}% U+0457
16499 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
16500 \DeclareTextCommand{\cyrjje}{PU}{\84\130}% U+0458
16501 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
16502 \DeclareTextCommand{\cyrjlje}{PU}{\84\131}% U+0459
16503 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
16504 \DeclareTextCommand{\cyrjnje}{PU}{\84\132}% U+045A
16505 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
16506 \DeclareTextCommand{\cyrjtshe}{PU}{\84\133}% U+045B
16507 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
16508 \DeclareTextCompositeCommand{\'}{PU}{\cyrjk}{\84\134}% U+045C
16509 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
16510 \DeclareTextCompositeCommand{\`}{PU}{\cyrji}{\84\135}% U+045D
16511 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
16512 \DeclareTextCommand{\cyrjushrt}{PU}{\84\136}% U+045E
16513 \DeclareTextCompositeCommand{\U}{PU}{\cyrju}{\84\136}% U+045E
16514 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
16515 \DeclareTextCommand{\cyrjdzhe}{PU}{\84\137}% U+045F
16516 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
16517 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
16518 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic

16519 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
16520 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
16521 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
16522 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
16523 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
16524 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
16525 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
16526 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
16527 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
16528 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
16529 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
16530 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
16531 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
16532 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
16533 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
16534 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
16535 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
16536 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
16537 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
16538 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
16539 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
16540 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
16541 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
16542 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic
16543 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
16544 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
16545 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
16546 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
16547 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
16548 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
16549 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
16550 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
16551 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
16552 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
16553 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
16554 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
16555 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
16556 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
16557 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
16558 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
16559 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
16560 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
GRAVE ACCENT; Izhitsadblgravecyrillic
16561 % GRAVE ACCENT; Izhitsadblgravecyrillic
16562 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
16563 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
GRAVE ACCENT; izhitsadblgravecyrillic
16564 % GRAVE ACCENT; izhitsadblgravecyrillic
16565 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
16566 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
16567 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
16568 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic

16569 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
16570 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
16571 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
16572 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
16573 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
16574 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
16575 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
16576 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
16577 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
16578 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
16579 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
16580 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
16581 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
16582 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
16583 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
16584 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
16585 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
16586 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
16587 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
\84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
\84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
\84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
\84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatcyrilliccmb
\84\207: U+0487 COMBINING CYRILLIC POKRYTIE
\84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
\84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
16588 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
16589 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
16590 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
16591 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
16592 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
16593 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
16594 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
16595 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
16596 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
16597 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
16598 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
16599 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
16600 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
16601 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
16602 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
16603 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
16604 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
16605 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492

16606 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
16607 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
16608 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
16609 % Ghemiddlehookcyrillic
16610 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
16611 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
16612 % ghemiddlehookcyrillic
16613 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
16614 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
16615 % Zhedescendercyrillic
16616 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
16617 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
16618 % zhedescendercyrillic
16619 \DeclareTextCommand{\cyrzhsc}{PU}{\84\227}% U+0497
16620 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
dercyrillic
16621 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
16622 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
16623 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
cyrillic
16624 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
16625 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
16626 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
dercyrillic
16627 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
16628 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
dercyrillic
16629 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
16630 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
16631 % Kavertikalstrokecyrillic
16632 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
16633 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
16634 % kavertikalstrokecyrillic
16635 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
16636 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
16637 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
16638 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
16639 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
16640 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
16641 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
16642 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
16643 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
16644 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
dercyrillic
16645 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
16646 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
cyrillic
16647 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
16648 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
16649 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
16650 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
16651 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
16652 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
dlehookcyrillic

16653 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
16654 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
16655 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
16656 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
16657 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
16658 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
16659 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
16660 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
16661 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
16662 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
16663 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
16664 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
16665 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
16666 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
16667 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
16668 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
16669 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
16670 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
16671 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
16672 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
16673 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
16674 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
16675 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
16676 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
16677 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
16678 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescendercyrillic
16679 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
16680 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
16681 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
16682 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
16683 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
16684 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
16685 \DeclareTextCommand{\cyrтетse}{PU}{\84\265}% U+04B5
16686 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
16687 % Chedescendercyrillic
16688 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
16689 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
16690 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
16691 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
16692 % Cheverticalstrokecyrillic
16693 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
16694 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
16695 % cheverticalstrokecyrillic

16696 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
16697 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
16698 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
16699 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
16700 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
16701 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-cyrillic
16702 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
16703 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
16704 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
16705 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
16706 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
16707 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
16708 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
16709 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
16710 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
16711 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
16712 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
16713 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
16714 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
16715 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
16716 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
16717 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
16718 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
16719 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
16720 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
16721 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
16722 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
16723 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
16724 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
16725 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
16726 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
16727 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
16728 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
16729 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
16730 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
16731 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
16732 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
16733 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
16734 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
16735 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
16736 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
16737 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
16738 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
16739 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
16740 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
16741 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic

16742 \DeclareTextCompositeCommand{\}{PU}{\CYRA}{\84\322}% U+04D2
16743 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
16744 \DeclareTextCompositeCommand{\}{PU}{\cyra}{\84\323}% U+04D3
16745 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
16746 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
16747 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
16748 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
16749 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
16750 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
16751 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
16752 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
16753 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
16754 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
16755 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
16756 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
16757 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
16758 % Schwadieresiscyrillic
16759 \DeclareTextCompositeCommand{\}{PU}{\CYRSCHWA}{\84\332}% U+04DA
16760 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
16761 % schwadieresiscyrillic
16762 \DeclareTextCompositeCommand{\}{PU}{\cyrswa}{\84\333}% U+04DB
16763 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedie-
siscyrillic
16764 \DeclareTextCompositeCommand{\}{PU}{\CYRZH}{\84\334}% U+04DC
16765 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
cyrillic
16766 \DeclareTextCompositeCommand{\}{PU}{\cyrzh}{\84\335}% U+04DD
16767 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
cyrillic
16768 \DeclareTextCompositeCommand{\}{PU}{\CYRZ}{\84\336}% U+04DE
16769 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyril-
lic
16770 \DeclareTextCompositeCommand{\}{PU}{\cyrz}{\84\337}% U+04DF
16771 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
cyrillic
16772 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
16773 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyril-
lic
16774 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
16775 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
16776 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
16777 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
16778 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
16779 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
16780 \DeclareTextCompositeCommand{\}{PU}{\CYRI}{\84\344}% U+04E4
16781 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
16782 \DeclareTextCompositeCommand{\}{PU}{\cyri}{\84\345}% U+04E5
16783 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyril-
lic
16784 \DeclareTextCompositeCommand{\}{PU}{\CYRO}{\84\346}% U+04E6
16785 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
16786 \DeclareTextCompositeCommand{\}{PU}{\cyro}{\84\347}% U+04E7
16787 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
16788 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8

16789 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
16790 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
16791 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
16792 % Obarreddieresiscyrillic
16793 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
16794 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
16795 % obarreddieresiscyrillic
16796 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
16797 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
16798 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
16799 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
16800 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
16801 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
16802 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\356}% U+04EE
16803 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
16804 \DeclareTextCompositeCommand{=} {PU}{\cyru}{\84\357}% U+04EF
16805 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
16806 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
16807 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
16808 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
16809 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
16810 \DeclareTextCompositeCommand{H}{PU}{\CYRU}{\84\362}% U+04F2
16811 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
16812 \DeclareTextCompositeCommand{H}{PU}{\cyru}{\84\363}% U+04F3
16813 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
16814 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
16815 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
16816 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
16817 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
16818 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
16819 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
16820 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
16821 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
16822 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
16823 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
16824 \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
16825 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
16826 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
16827 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
16828 \DeclareTextCommand{\cyrhhk}{PU}{\84\375}% U+04FD
16829 \fi
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE

\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

46.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`. `hebrew` is only loaded if `\hebdalet` is defined

```
16830 \ifx\hebdalet\@undefined\else
16831 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
16832 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
16833 % U+05D0 HEBREW LETTER ALEF
16834 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
16835 % U+05D1 HEBREW LETTER BET
16836 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
16837 % U+05D2 HEBREW LETTER GIMEL
16838 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
16839 % U+05D3 HEBREW LETTER DALET
16840 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
16841 % U+05D4 HEBREW LETTER HE
16842 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
16843 % U+05D5 HEBREW LETTER VAV
16844 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
16845 % U+05D6 HEBREW LETTER ZAYIN
16846 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
16847 % U+05D7 HEBREW LETTER HET
16848 \DeclareTextCommand{\hebhhet}{PU}{\85\327}% U+05D7
16849 % U+05D8 HEBREW LETTER TET
16850 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
16851 % U+05D9 HEBREW LETTER YOD
16852 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
16853 % U+05DA HEBREW LETTER FINAL KAF
16854 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
16855 % U+05DB HEBREW LETTER KAF
16856 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
16857 % U+05DC HEBREW LETTER LAMED
16858 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
16859 % U+05DD HEBREW LETTER FINAL MEM
16860 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
16861 % U+05DE HEBREW LETTER MEM
16862 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
16863 % U+05DF HEBREW LETTER FINAL NUN
16864 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
16865 % U+05E0 HEBREW LETTER NUN
16866 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
16867 % U+05E1 HEBREW LETTER SAMEKH
16868 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
16869 % U+05E2 HEBREW LETTER AYIN
16870 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
16871 % U+05E3 HEBREW LETTER FINAL PE
16872 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
16873 % U+05E4 HEBREW LETTER PE
16874 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
16875 % U+05E5 HEBREW LETTER FINAL TSADI
16876 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
16877 % U+05E6 HEBREW LETTER TSADI
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16878 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 16879 % U+05E7 HEBREW LETTER QOF
 16880 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 16881 % U+05E8 HEBREW LETTER RESH
 16882 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 16883 % U+05E9 HEBREW LETTER SHIN
 16884 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 16885 %* \hebshin -> \hebsin (he8)
 16886 % U+05EA HEBREW LETTER TAV
 16887 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 16888 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 16889 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 16890 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 16891 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 16892 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 16893 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2
 16894 \fi

46.2.12 Thai: U+0E00 to U+0E7F

16895 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 16896 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

46.2.13 Phonetic Extensions: U+1D00 to U+1D7F

16897 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
 16898 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
 16899 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 16900 \DeclareTextCommand{\textscD}{PU}{\9035\005}%* U+1D05
 16901 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
 16902 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
 16903 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
 16904 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
 16905 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 16906 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 16907 %* \textPUscK -> \textscK (tipx)
 16908 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)
 16909 \DeclareTextCommand{\textPUscM}{PU}{\9035\015}% U+1D0D
 16910 %* \textPUscM -> \textscM (tipx)
 16911 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 16912 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 16913 %* \textPUscP -> \textscP (tipx)
 16914 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 16915 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 16916 %* \textPUrevscr -> \textrevscr (tipx)
 16917 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \scu (wsuipa)
 16918 \DeclareTextCommand{\textscU}{PU}{\9035\034}%* U+1D1C
 16919 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 16920 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 16921 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 16922 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 16923 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 16924 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 16925 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 16926 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65

16927 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 16928 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 16929 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 16930 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 16931 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 16932 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 16933 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 16934 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 16935 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 16936 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 16937 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 16938 % \barsci (wsuipa)
 16939 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 16940 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 16941 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 16942 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 16943 % \barscu (wsuipa)
 16944 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

46.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

16945 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \text-
 trhooka (tipx)
 16946 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 16947 %* \textPURhooka -> \texttrhooka (tipx)
 16948 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 16949 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 16950 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \text-
 trhooke (tipx)
 16951 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 16952 %* \textPURhooke -> \texttrhooke (tipx)
 16953 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 16954 % \textrhookepsilon (tipx)
 16955 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 16956 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 16957 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 16958 % \textrhookopeno (tipx)
 16959 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 16960 %* \textPURhookopeno -> \textrhookopeno (tipx)

46.2.15 Latin Extended Additional: U+1E00 to U+1EFF

16961 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 16962 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 16963 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 16964 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 16965 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 16966 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 16967 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 16968 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 16969 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 16970 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 16971 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 16972 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 16973 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow

16974 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
16975 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
16976 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
16977 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
16978 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
16979 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
16980 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
16981 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
16982 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
16983 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
16984 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
16985 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
16986 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
16987 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
16988 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
16989 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
16990 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
16991 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
16992 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
16993 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcircumflexbelow
16994 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
16995 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dircumflexbelow
16996 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
16997 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
16998 % Emacrongrave
16999 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
17000 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
17001 % emacrongrave
17002 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
17003 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
17004 % Emacronacute
17005 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
17006 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
17007 % emacronacute
17008 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
17009 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecircumflexbelow
17010 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
17011 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; eircumflexbelow
17012 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
17013 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
17014 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
17015 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
17016 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
17017 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
17018 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
17019 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
17020 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
17021 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
17022 \DeclareTextCompositeCommand{\=} {PU}{G}{\9036\040}% U+1E20
17023 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron

17024 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
17025 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
17026 \DeclareTextCompositeCommand{.} {PU}{H}{\9036\042}% U+1E22
17027 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
17028 \DeclareTextCompositeCommand{.} {PU}{h}{\9036\043}% U+1E23
17029 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
17030 \DeclareTextCompositeCommand{d} {PU}{H}{\9036\044}% U+1E24
17031 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
17032 \DeclareTextCompositeCommand{d} {PU}{h}{\9036\045}% U+1E25
17033 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
17034 \DeclareTextCompositeCommand{"} {PU}{H}{\9036\046}% U+1E26
17035 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
17036 \DeclareTextCompositeCommand{"} {PU}{h}{\9036\047}% U+1E27
17037 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
17038 \DeclareTextCompositeCommand{c} {PU}{H}{\9036\050}% U+1E28
17039 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
17040 \DeclareTextCompositeCommand{c} {PU}{h}{\9036\051}% U+1E29
17041 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
17042 \DeclareTextCompositeCommand{\textsubbreve} {PU}{H}{\9036\052}% U+1E2A
17043 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
17044 \DeclareTextCompositeCommand{\textsubbreve} {PU}{h}{\9036\053}% U+1E2B
17045 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
17046 \DeclareTextCompositeCommand{\textsubtilde} {PU}{I}{\9036\054}% U+1E2C
17047 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
17048 \DeclareTextCompositeCommand{\textsubtilde} {PU}{i}{\9036\055}% U+1E2D
17049 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
17050 \DeclareTextCompositeCommand{'} {PU}{K}{\9036\060}% U+1E30
17051 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
17052 \DeclareTextCompositeCommand{'} {PU}{k}{\9036\061}% U+1E31
17053 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
17054 \DeclareTextCompositeCommand{d} {PU}{K}{\9036\062}% U+1E32
17055 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
17056 \DeclareTextCompositeCommand{d} {PU}{k}{\9036\063}% U+1E33
17057 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
17058 \DeclareTextCompositeCommand{\b} {PU}{K}{\9036\064}% U+1E34
17059 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
17060 \DeclareTextCompositeCommand{\b} {PU}{k}{\9036\065}% U+1E35
17061 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
17062 \DeclareTextCompositeCommand{d} {PU}{L}{\9036\066}% U+1E36
17063 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
17064 \DeclareTextCompositeCommand{d} {PU}{l}{\9036\067}% U+1E37
17065 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
17066 \DeclareTextCompositeCommand{\b} {PU}{L}{\9036\072}% U+1E3A
17067 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
17068 \DeclareTextCompositeCommand{\b} {PU}{l}{\9036\073}% U+1E3B
17069 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcircumflexbelow
17070 \DeclareTextCompositeCommand{\textsubcircum} {PU}{L}{\9036\074}% U+1E3C
17071 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcircumflexbelow
17072 \DeclareTextCompositeCommand{\textsubcircum} {PU}{l}{\9036\075}% U+1E3D
17073 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
17074 \DeclareTextCompositeCommand{'} {PU}{M}{\9036\076}% U+1E3E
17075 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute

17076 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
17077 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
17078 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
17079 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
17080 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
17081 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
17082 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
17083 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
17084 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
17085 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
17086 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
17087 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
17088 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
17089 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
17090 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
17091 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
17092 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
17093 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
17094 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
17095 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
17096 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
17097 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncircumflexbelow
17098 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
17099 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncircumflexbelow
17100 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
17101 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
17102 % Omacrongrave
17103 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
17104 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
17105 % omacrongrave
17106 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
17107 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
17108 % Omacronacute
17109 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
17110 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
17111 % omacronacute
17112 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
17113 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
17114 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
17115 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
17116 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
17117 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
17118 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
17119 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
17120 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
17121 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
17122 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
17123 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
17124 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
17125 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
17126 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
17127 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow

17128 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
17129 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
17130 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
17131 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
17132 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
17133 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
17134 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
17135 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
17136 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
17137 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
17138 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
17139 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
17140 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
17141 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
17142 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
17143 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
17144 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
17145 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
17146 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
17147 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
17148 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
17149 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
17150 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
17151 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
17152 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
17153 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcircumflexbelow
17154 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
17155 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcircumflexbelow
17156 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
17157 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
17158 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
17159 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
17160 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
17161 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
17162 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
17163 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
17164 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
17165 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucircumflexbelow
17166 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
17167 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucircumflexbelow
17168 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
17169 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
17170 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
17171 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
17172 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
17173 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
17174 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
17175 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow

17176 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
17177 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
17178 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
17179 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
17180 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
17181 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
17182 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
17183 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
17184 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
17185 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
17186 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
17187 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
17188 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
17189 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
17190 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
17191 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
17192 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
17193 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
17194 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
17195 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
17196 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
17197 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
17198 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
17199 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
17200 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
17201 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
17202 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
17203 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
17204 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
17205 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
17206 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
17207 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
17208 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
17209 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
17210 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
17211 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
17212 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
17213 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
17214 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
17215 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
17216 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
17217 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
17218 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
17219 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
17220 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
17221 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
17222 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
17223 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
17224 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
17225 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
17226 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
17227 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
17228 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
17229 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-

taccent

17230 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
17231 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
17232 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
17233 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
17234 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
17235 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
17236 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
17237 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
17238 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
17239 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
17240 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
17241 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
17242 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
17243 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
17244 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
17245 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
17246 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
17247 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
17248 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
17249 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
17250 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
17251 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
17252 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
17253 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
17254 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
17255 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
17256 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
17257 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
17258 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
17259 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
17260 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
17261 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
17262 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
17263 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
17264 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
17265 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
17266 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

46.2.16 General Punctuation: U+2000 to U+206F

17267 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
17268 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
17269 % U+2013 EN DASH; endash
17270 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
17271 % U+2014 EM DASH; emdash
17272 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
17273 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
17274 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
17275 %* \textbardbl -> \textdoublevertline (tipa)
17276 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
17277 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
17278 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
17279 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
17280 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase

17281 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
17282 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
17283 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
17284 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
17285 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
17286 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
17287 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
17288 % U+2020 DAGGER; dagger
17289 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
17290 %* \textdagger -> \dag (LaTeX)
17291 % U+2021 DOUBLE DAGGER; daggerdbl; ddagger (LaTeX)
17292 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
17293 %* \textdaggerdbl -> \ddagger (LaTeX)
17294 %* \textdaggerdbl -> \ddag (LaTeX)
17295 % U+2022 BULLET; bullet
17296 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
17297 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
17298 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
17299 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
17300 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
17301 %* \textellipsis -> \mathellipsis
17302 % U+2030 PER MILLE SIGN; perthousand
17303 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
17304 % U+2031 PER TEN THOUSAND SIGN
17305 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
17306 % U+2032 PRIME; minute; \prime (MnSymbol)
17307 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
17308 % U+2033 DOUBLE PRIME; \second (mathabx)
17309 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
17310 % U+2034 TRIPLE PRIME; \third (mathabx)
17311 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
17312 % U+2035 REVERSED PRIME; \backprime (AmS)
17313 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
17314 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
17315 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
17316 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
ingright
17317 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
17318 % U+203B REFERENCE MARK; referencemark
17319 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
17320 % U+203D INTERROBANG
17321 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
17322 % U+2044 FRACTION SLASH; fraction
17323 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
17324 % U+2045 LEFT SQUARE BRACKET WITH QUILL
17325 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
17326 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
17327 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
17328 % U+2052 COMMERCIAL MINUS SIGN
17329 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
17330 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
17331 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
17332 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)

17333 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 17334 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 17335 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

46.2.17 Superscripts and Subscripts: U+2070 to U+209F

17336 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 17337 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 17338 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 17339 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 17340 % U+2074 SUPERSCRIPT FOUR; foursuperior
 17341 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 17342 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 17343 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 17344 % U+2076 SUPERSCRIPT SIX; sixsuperior
 17345 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 17346 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 17347 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 17348 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 17349 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 17350 % U+2079 SUPERSCRIPT NINE; ninesuperior
 17351 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 17352 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 17353 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 17354 % U+207B SUPERSCRIPT MINUS
 17355 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 17356 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 17357 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 17358 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 17359 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 17360 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 17361 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 17362 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 17363 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 17364 % U+2080 SUBSCRIPT ZERO; zeroinferior
 17365 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 17366 % U+2081 SUBSCRIPT ONE; oneinferior
 17367 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 17368 % U+2082 SUBSCRIPT TWO; twoinferior
 17369 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 17370 % U+2083 SUBSCRIPT THREE; threeinferior
 17371 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 17372 % U+2084 SUBSCRIPT FOUR; fourinferior
 17373 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 17374 % U+2085 SUBSCRIPT FIVE; fiveinferior
 17375 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 17376 % U+2086 SUBSCRIPT SIX; sixinferior
 17377 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 17378 % U+2087 SUBSCRIPT SEVEN; seveninferior
 17379 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 17380 % U+2088 SUBSCRIPT EIGHT; eightinferior
 17381 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 17382 % U+2089 SUBSCRIPT NINE; nineinferior
 17383 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 17384 % U+208A SUBSCRIPT PLUS SIGN

17385 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
17386 % U+208B SUBSCRIPT MINUS
17387 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
17388 % U+208C SUBSCRIPT EQUALS SIGN
17389 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
17390 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
17391 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
17392 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
17393 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
17394 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
17395 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
17396 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
17397 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
17398 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
17399 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
17400 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
17401 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
17402 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
17403 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
17404 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
17405 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
17406 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
17407 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
17408 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
17409 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
17410 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
17411 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
17412 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
17413 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
17414 % U+209A LATIN SUBSCRIPT SMALL LETTER P
17415 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
17416 % U+209B LATIN SUBSCRIPT SMALL LETTER S
17417 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
17418 % U+209C LATIN SUBSCRIPT SMALL LETTER T
17419 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

46.2.18 Currency Symbols: U+20A0 to U+20CF

17420 % U+20A1 COLON SIGN; *colonmonetary, colonsign
17421 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
17422 % U+20A4 LIRA SIGN; afi08941, *lira
17423 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
17424 % U+20A6 NAIRA SIGN
17425 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
17426 % U+20A7 PESETA SIGN; peseta
17427 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
17428 % U+20A9 WON SIGN; won
17429 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
17430 % U+20AB DONG SIGN; dong
17431 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
17432 % U+20AC EURO SIGN; *Euro, euro
17433 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
17434 %* \texteuro -> \EurDig (marvosym)
17435 %* \texteuro -> \EURdig (marvosym)
17436 %* \texteuro -> \EurHv (marvosym)

17437 %* \texteuero -> \EURhv (marvosym)
 17438 %* \texteuero -> \EurCr (marvosym)
 17439 %* \texteuero -> \EURcr (marvosym)
 17440 %* \texteuero -> \EurTm (marvosym)
 17441 %* \texteuero -> \EURtm (marvosym)
 17442 %* \texteuero -> \Eur (marvosym)
 17443 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 17444 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}% U+20B0
 17445 %* \textDeleatur -> \Denarius (marvosym)
 17446 % U+20B1 PESO SIGN
 17447 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 17448 % U+20B2 GUARANI SIGN
 17449 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

46.2.19 Letterlike Symbols: U+2100 to U+214F

17450 % U+2103 DEGREE CELSIUS; centigrade
 17451 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 17452 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 17453 \DeclareTextCommand{\texthslash}{PU}{\9041\017}% U+210F
 17454 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 17455 \DeclareTextCommand{\textIm}{PU}{\9041\021}% U+2111
 17456 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 17457 \DeclareTextCommand{\textell}{PU}{\9041\023}% U+2113
 17458 % U+2116 NUMERO SIGN; *afii61352, numero
 17459 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 17460 % U+2117 SOUND RECORDING COPYRIGHT
 17461 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 17462 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 17463 % weierstrass; \wp (LaTeX)
 17464 \DeclareTextCommand{\textwp}{PU}{\9041\030}% U+2118
 17465 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 17466 \DeclareTextCommand{\textRe}{PU}{\9041\034}% U+211C
 17467 % U+211E PRESCRIPTION TAKE; prescription
 17468 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 17469 % U+2120 SERVICE MARK
 17470 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 17471 % U+2122 TRADE MARK SIGN; trademark
 17472 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 17473 % U+2126 OHM SIGN; Ohm, Omega
 17474 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 17475 % U+2127 INVERTED OHM SIGN
 17476 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 17477 %* \textmho -> \agemO (wasysym)
 17478 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 17479 \DeclareTextCommand{\textriota}{PU}{\9041\051}% U+2129
 17480 % U+212B ANGSTROM SIGN; angstrom
 17481 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 17482 % U+212E ESTIMATED SYMBOL; estimated
 17483 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 17484 %* \textestimated -> \EstimatedSign (marvosym)
 17485 %* \textestimated -> \Ecommerce (marvosym)
 17486 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 17487 \DeclareTextCommand{\textFinv}{PU}{\9041\062}% U+2132

17488 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 17489 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 17490 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 17491 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 17492 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 17493 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 17494 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 17495 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 17496 % U+213B FACSIMILE SIGN; \fax (marvosym)
 17497 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 17498 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 17499 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 17500 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 17501 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}%* U+214B
 17502 %* \textinvamp -> \bindnasrepma (stmaryrd)
 17503 %* \textinvamp -> \parr (cml)

46.2.20 Number Forms: U+2150 to U+218F

17504 % U+2150 VULGAR FRACTION ONE SEVENTH
 17505 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 17506 % U+2151 VULGAR FRACTION ONE NINTH
 17507 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 17508 % U+2152 VULGAR FRACTION ONE TENTH
 17509 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 17510 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 17511 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 17512 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 17513 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 17514 % U+2155 VULGAR FRACTION ONE FIFTH
 17515 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 17516 % U+2156 VULGAR FRACTION TWO FIFTHS
 17517 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 17518 % U+2157 VULGAR FRACTION THREE FIFTHS
 17519 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 17520 % U+2158 VULGAR FRACTION FOUR FIFTHS
 17521 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 17522 % U+2159 VULGAR FRACTION ONE SIXTH
 17523 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 17524 % U+215A VULGAR FRACTION FIVE SIXTHS
 17525 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 17526 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 17527 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 17528 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 17529 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 17530 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 17531 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 17532 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 17533 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 17534 % U+2184 LATIN SMALL LETTER REVERSED C
 17535 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 17536 % U+2189 VULGAR FRACTION ZERO THIRDS
 17537 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

46.2.21 Arrows: U+2190 to U+21FF

17538 % U+2190 LEFTWARDS ARROW; arrowleft
17539 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
17540 % U+2191 UPWARDS ARROW; arrowup
17541 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
17542 % U+2192 RIGHTWARDS ARROW; arrowright
17543 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
17544 %* \textrightarrow -> \MVRightArrow (marvosym)
17545 %* \textrightarrow -> \MVRightarrow (marvosym)
17546 % U+2193 DOWNWARDS ARROW; arrowdown
17547 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
17548 %* \textdownarrow -> \MVArrowDown (marvosym)
17549 %* \textdownarrow -> \Force (marvosym)
17550 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
17551 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
17552 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
17553 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
17554 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
17555 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
17556 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
17557 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
17558 %* \textnearrow -> \textglobe (tipa)
17559 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
17560 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
17561 %* \textsearrow -> \textglobfall (tipa)
17562 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
17563 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
17564 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
17565 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
17566 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
17567 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
17568 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
17569 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
17570 % \twoheadleftarrow (txfonts/pxfonts)
17571 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
17572 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
17573 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
17574 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
17575 % \twoheadrightarrow (AmS)
17576 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
17577 % \twoheadrightarrow (txfonts/pxfonts)
17578 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
17579 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
17580 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
17581 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
17582 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
17583 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
17584 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
17585 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
17586 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
17587 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
17588 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
17589 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
17590 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA

17591 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
17592 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
17593 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
17594 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
17595 % U+21AE LEFT RIGHT ARROW WITH STROKE; \nletrightarrow (AmS)
17596 \DeclareTextCommand{\textnletrightarrow}{PU}{\9041\256}%* U+21AE
17597 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
17598 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
17599 %* \textlightning -> \Lightning (marvosym)
17600 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
17601 % \dlsH (mathabx)
17602 \DeclareTextCommand{\textdlsH}{PU}{\9041\265}%* U+21B5
17603 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
17604 % \curvearrowleft (AmS)
17605 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
17606 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
17607 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
17608 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;
17609 % \leftharpoonup (LaTeX)
17610 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
17611 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
17612 % \leftharpoondown (LaTeX)
17613 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
17614 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
17615 % \upharpoonright (AmS)
17616 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
17617 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
17618 % \upharpoonleft (AmS)
17619 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
17620 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
barbup
17621 % \rightharpoonup (LaTeX)
17622 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
17623 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
17624 % \rightharpoondown (LaTeX)
17625 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
17626 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
17627 % \downharpoonright (AmS)
17628 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
17629 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
17630 % \downharpoonleft (AmS)
17631 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
17632 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
17633 % \rightarrowoverleft; \rightleftarrows (MnSymbol)
17634 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
17635 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
rowupleftofdown;
17636 % \updownarrows (MnSymbol)
17637 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
17638 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
overright;
17639 % \leftrightarrows (AmS)
17640 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6

17641 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
17642 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
17643 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
17644 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
17645 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
17646 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
17647 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
17648 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
17649 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
17650 % \leftrightharpoons (AmS);
17651 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
17652 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
17653 % \rightleftharpoons (LaTeX, AmS)
17654 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
17655 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
blstroke;
17656 % \nLeftarrow (AmS)
17657 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
17658 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightarrow
(AmS)
17659 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
17660 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
blstroke;
17661 % \nrightarrow (AmS)
17662 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\317}%* U+21CF
17663 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
17664 % \Leftarrow (LaTeX)
17665 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
17666 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
17667 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
17668 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
17669 % \rightarrow (LaTeX)
17670 \DeclareTextCommand{\textrightarrow}{PU}{\9041\322}%* U+21D2
17671 %* \textrightarrow -> \Conclusion (marvosym)
17672 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (La-
TeX)
17673 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
17674 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
17675 % \Leftrightarrow (LaTeX)
17676 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
17677 %* \textLeftrightarrow -> \Equivalence (marvosym)
17678 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
17679 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
17680 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
17681 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
17682 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
17683 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
17684 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
17685 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
17686 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
17687 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
17688 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
17689 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
17690 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)

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17691 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
17692 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
17693 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
17694 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
17695 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
17696 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
17697 % \dashleftarrow (AmS)
17698 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
17699 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
17700 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
17701 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
17702 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow
(AmS)
17703 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
17704 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
17705 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
17706 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
17707 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
17708 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
17709 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
17710 % \downuparrows (MnSymbol)
17711 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
17712 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
17713 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
17714 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
17715 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
17716 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtri-
angle (stmaryrd)
17717 \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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17718 % U+2200 FOR ALL; forall; \forall (LaTeX)
17719 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
17720 % U+2201 COMPLEMENT; \complement (AmS)
17721 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
17722 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
17723 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
17724 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
17725 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
17726 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
17727 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
17728 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
17729 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
17730 %* \textemptyset -> \varnothing (AmS)
17731 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
17732 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
17733 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
17734 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
17735 % U+2208 ELEMENT OF; element; \in (LaTeX)
17736 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
17737 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
17738 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209

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17739 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
17740 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
17741 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
17742 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
17743 %* \textni -> \owns (mathabx)
17744 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
17745 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
17746 %* \textnotowner -> \notni (txfonts/pxfonts)
17747 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
17748 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
17749 % U+220F N-ARY PRODUCT; \prod (LaTeX)
17750 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
17751 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
17752 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
17753 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
17754 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
17755 % U+2212 MINUS SIGN; minus
17756 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
17757 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
17758 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
17759 % U+2214 DOT PLUS; \dotplus (AmS)
17760 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
17761 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
17762 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
17763 % \DividesNot (marvosym)
17764 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
17765 % U+2216 SET MINUS; \setminus (LaTeX)
17766 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
17767 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
17768 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
17769 % U+2218 RING OPERATOR; \circ (LaTeX)
17770 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
17771 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
17772 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
17773 % U+221A SQUARE ROOT; radical
17774 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
17775 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
17776 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
17777 %* \textpropto -> \varprop (wasysym)
17778 % U+221E INFINITY; infinity; \infty (LaTeX)
17779 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
17780 % U+2220 ANGLE; angle; \angle (LaTeX)
17781 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
17782 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
17783 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
17784 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
17785 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
17786 %* \textsphericalangle -> \varangle (wasysym)
17787 %* \textsphericalangle -> \Anglesign (marvosym)
17788 %* \textsphericalangle -> \AngleSign (marvosym)
17789 % U+2223 DIVIDES; divides; \mid (LaTeX)
17790 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
17791 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
17792 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224

17793 %* \textnmid -> \notdivides (mathabx)
17794 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
17795 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
17796 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
17797 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
17798 %* \textnparallel -> nUpdownline (MnSymbol)
17799 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
17800 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
17801 % \owedge (stmaryrd)
17802 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
17803 %* \textowedge -> \varowedge (stmaryrd)
17804 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
17805 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
17806 % \ovee (stmaryrd)
17807 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
17808 %* \textovee -> \varovee (stmaryrd)
17809 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
17810 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
17811 % U+222A UNION; union; \cup (LaTeX)
17812 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
17813 % U+222B INTEGRAL; integral; \int (LaTeX)
17814 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
17815 %* \textint -> \varint (wasysym)
17816 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
17817 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
17818 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
17819 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
17820 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
17821 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
17822 %* \textoint -> \varoint (wasysym)
17823 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
17824 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
17825 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
17826 % \ointclockwise (txfonts/pxfonts)
17827 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
17828 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrlockwise (tx-
font/pxfont)
17829 \DeclareTextCommand{\textointctrlockwise}{PU}{\9042\063}%* U+2233
17830 % U+2234 THEREFORE; therefore; \therefore (AmS)
17831 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
17832 %* \texttherefore -> uptherefore (MnSymbol)
17833 % U+2235 BECAUSE; because; \because (AmS)
17834 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
17835 %* \textbecause -> \downtherefore (MnSymbol)
17836 % U+2236 RATIO; \vdotdot (MnSymbol)
17837 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
17838 % U+2237 PROPORTION; \squaredots (MnSymbol)
17839 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
17840 % U+2238 DOT MINUS; \dotminus (MnSymbol)
17841 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
17842 %* \textdotminus -> \textdotdiv (mathabx)
17843 % U+2239 EXCESS; \eqcolon (txfonts/pxfont)
17844 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
17845 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)

17846 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
17847 %* \textsim -> \AC (wasysym)
17848 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
17849 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
17850 % \nbacksim (txfonts/pxfonts)
17851 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
17852 % U+2240 WREATH PRODUCT; \wr (LaTeX)
17853 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
17854 %* \textwr -> \wreath (MnSymbol)
17855 % U+2241 NOT TILDE; \nsim (AmS)
17856 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
17857 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
17858 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
17859 % \neqsim (MnSymbol)
17860 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
17861 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
17862 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
17863 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
17864 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
17865 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
17866 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
17867 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
17868 % \ncong (AmS)
17869 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
17870 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
17871 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
17872 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
17873 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
17874 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
17875 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
17876 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
17877 % \napproxeq (txfonts/pxfonts)
17878 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
17879 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
17880 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
17881 %* \texttriplesim -> \VHF (wasysym)
17882 % \ntriplesim (MnSymbol)
17883 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
17884 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
17885 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
17886 % \nbackcong (MnSymbol)
17887 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
17888 % U+224D EQUIVALENT TO; \asymp (LaTeX)
17889 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
17890 % \nasymp (txfonts/pxfonts)
17891 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
17892 %* \textnasymp -> \notasymp (mathabx)
17893 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
17894 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
17895 % \nBumpeq (txfonts/pxfonts)
17896 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
17897 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
17898 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F

17899 % \nbumpeq (txfonts/pxfonts)
17900 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
17901 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
17902 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
17903 % \ndoteq (MnSymbol)
17904 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
17905 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
17906 % \doteqdot (AmS)
17907 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
17908 %* \textdoteqdot -> \Doteq (MnSymbol)
17909 % \nDoteq (MnSymbol)
17910 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
17911 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
equalorimage;
17912 % \fallingdotseq (AmS)
17913 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
17914 % \nfallingdotseq (MnSymbol)
17915 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
17916 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapprox-
imatelyequal;
17917 % \risingdotseq (AmS)
17918 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
17919 % \nrisingdotseq (MnSymbol)
17920 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
17921 % U+2254 COLON EQUALS; \colonequals (colonequals)
17922 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
17923 % U+2255 EQUALS COLON; \equalscolon (colonequals)
17924 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
17925 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
17926 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
17927 % \neqcirc (MnSymbol)
17928 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
17929 % U+2257 RING EQUAL TO; \circeq (AmS)
17930 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
17931 % \ncirceq (MnSymbol)
17932 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
17933 % U+2259 ESTIMATES; \hateq (MnSymbol)
17934 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
17935 %* \texthateq -> \corresponds (mathabx)
17936 %* \texthateq -> \Corresponds (marvosym)
17937 % \nhateq (MnSymbol)
17938 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
17939 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
17940 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
17941 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
17942 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
17943 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
17944 %* \textneq -> \nequal (MnSymbol)
17945 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
17946 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
17947 %* \textequiv -> \Congruent (marvosym)
17948 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
17949 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
17950 %* \textnequiv -> \NotCongruent (marvosym)

17951 %* \textnequiv -> \notequiv (mathabx)
17952 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
17953 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
17954 \DeclareTextCommand{\texttle}{PU}{\9042\144}%* U+2264
17955 %* \textleq -> \LessOrEqual (marvosym)
17956 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
17957 % \ge (LaTeX), \geq (LaTeX)
17958 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
17959 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
17960 %* \textgeq -> \LargerOrEqual (marvosym)
17961 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
17962 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
17963 % \nleqq (txfonts/pxfonts)
17964 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
17965 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
17966 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
17967 % \ngeqq (txfonts/pxfonts)
17968 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
17969 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
17970 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
17971 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
17972 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
17973 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
17974 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
17975 % \nll (txfonts/pxfonts)
17976 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
17977 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
17978 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
17979 % \ngg (txfonts/pxfonts)
17980 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
17981 % U+226C BETWEEN; \between (AmS)
17982 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
17983 % U+226E NOT LESS-THAN; notless; \nless (AmS)
17984 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
17985 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
17986 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
17987 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
17988 % \nleq (AmS)
17989 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
17990 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
17991 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
17992 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
17993 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
17994 %* \textlessim -> \apprle (wasysym)
17995 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
17996 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
17997 %* \textgtrsim -> \apprge (wasysym)
17998 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
17999 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
18000 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)

18001 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
18002 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
18003 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
18004 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
18005 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
18006 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
fonts/pxfonts)
18007 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
18008 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
fonts/pxfonts)
18009 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
18010 % U+227A PRECEDES; precedes; \prec (LaTeX)
18011 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
18012 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
18013 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
18014 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
18015 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
18016 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
18017 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
18018 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
18019 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
18020 % \nprecsim (txfonts/pxfonts)
18021 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
18022 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
18023 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
18024 % \nsuccsim (txfonts/pxfonts)
18025 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
18026 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
18027 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
18028 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
18029 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
18030 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
18031 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
18032 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
18033 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
18034 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
18035 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
18036 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
18037 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
18038 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
18039 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
18040 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
18041 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
18042 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
18043 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
18044 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
18045 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
18046 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
neq (AmS)
18047 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
18048 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
neq (AmS)
18049 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
18050 % U+228D MULTISET MULTIPLICATION; \cupdot (MnSymbol)

18051 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
18052 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
18053 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
18054 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
18055 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
18056 % \nsqsubset (txfonts/pxfonts)
18057 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
18058 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
18059 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
18060 % \nsqsupset (txfonts/pxfonts)
18061 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
18062 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
18063 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
18064 % \nsqsubseteq (txfonts/pxfonts)
18065 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
18066 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
18067 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
18068 % \nsqsupseteq (txfonts/pxfonts)
18069 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
18070 % U+2293 SQUARE CAP; \sqcap (LaTeX)
18071 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
18072 % U+2294 SQUARE CUP; \sqcup (LaTeX)
18073 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
18074 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
18075 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
18076 %* \textoplus -> \varoplus (stmaryrd)
18077 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
18078 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
18079 %* \textominus -> \varominus (stmaryrd)
18080 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
18081 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
18082 %* \textotimes -> \varotimes (stmaryrd)
18083 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
18084 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
18085 %* \textoslash -> \varoslash (stmaryrd)
18086 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
18087 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
18088 %* \textodot -> \varodot (stmaryrd)
18089 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
18090 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
18091 %* \textcircledcirc -> \ocirc (mathabx)
18092 %* \textcircledcirc -> \varocircle (stmaryrd)
18093 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
18094 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
18095 %* \textcircledast -> \varoast (stmaryrd)
18096 %* \textcircledast -> \oasterisk (mathabx)
18097 % U+229D CIRCLED DASH; \circleddash (AmS)
18098 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
18099 % U+229E SQUARED PLUS; \boxplus (AmS)
18100 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
18101 % U+229F SQUARED MINUS; \boxminus (AmS)
18102 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
18103 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
18104 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0

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18105 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
18106 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
18107 % U+22A2 RIGHT TACK; \vdash (LaTeX)
18108 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
18109 %* \textvdash -> \rightvdash (MnSymbol)
18110 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
18111 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
18112 %* \textdashv -> \leftvdash (MnSymbol)
18113 % \ndashv (mathabx)
18114 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
18115 %* \textndashv -> \nleftvdash (MnSymbol)
18116 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
18117 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
18118 %* \texttop -> \downvdash (MnSymbol)
18119 % \ndownvdash (MnSymbol)
18120 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
18121 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
18122 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
18123 %* \textbot -> \upvdash (MnSymbol)
18124 % \nupvdash (MnSymbol)
18125 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
18126 %* \textnupvdash -> \nperp (MnSymbol)
18127 % U+22A8 TRUE; \vDash (AmS)
18128 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
18129 %* \textvDash -> \models (LaTeX)
18130 %* \textvDash -> \rightmodels (MnSymbol)
18131 % U+22A9 FORCES; \Vdash (AmS)
18132 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
18133 %* \textVdash -> \rightVdash (MnSymbol)
18134 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
18135 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
18136 % \nVvdash (mathabx)
18137 \DeclareTextCommand{\textnVvdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
18138 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
18139 % \VDash (mathabx)
18140 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
18141 %* \textVDash -> \rightModels (MnSymbol)
18142 % U+22AC DOES NOT PROVE; \nvdash (AmS)
18143 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
18144 %* \textnvdash -> \nrightvdash (MnSymbol)
18145 % U+22AD NOT TRUE; \nvDash (AmS)
18146 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
18147 %* \textnvDash -> \nrightmodels (MnSymbol)
18148 %* \textnvDash -> \nmodels (MnSymbol)
18149 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
18150 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
18151 %* \textnVdash -> \nrightVdash (MnSymbol)
18152 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
      STILE; \nVDash (AmS)
18153 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
18154 %* \textnVDash -> \nrightModels (MnSymbol)
18155 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
18156 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
18157 %* \textlhd -> \lessclosed (MnSymbol)

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18158 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
18159 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
18160 %* \textrhd -> \gtrclosed (MnSymbol)
18161 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
18162 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
18163 %* \textunlhd -> \leqclosed (MnSymbol)
18164 %* \textunlhd -> \trianglelefteq (MnSymbol)
18165 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (latexsym, ...)
18166 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
18167 %* \textunrhd -> \geqclosed (MnSymbol)
18168 %* \textunrhd -> \trianglerighteq (MnSymbol)
18169 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
18170 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
18171 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
18172 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
18173 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
18174 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
18175 % U+22BB XOR; \veebar (AmS)
18176 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
18177 % U+22BC NAND; \barwedge (mathabx)
18178 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
18179 % U+22C6 STAR OPERATOR; \star (LaTeX)
18180 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
18181 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
18182 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
18183 % U+22C8 BOWTIE; \bowtie (LaTeX)
18184 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
18185 %* \textbowtie -> \Bowtie (wasysym)
18186 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
18187 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
18188 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
18189 % \rtimes (AmS)
18190 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
18191 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
18192 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
18193 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
18194 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
18195 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
18196 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
18197 % \nbacksimeq (txfonts/pxfonts)
18198 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
18199 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
18200 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
18201 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
18202 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
18203 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
18204 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
18205 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
18206 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
18207 % \nSubset (txfonts/pxfonts)
18208 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
18209 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
18210 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1

18211 % \nSupset (txfonts/pxfonts)
18212 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
18213 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
18214 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
18215 %* \textCap -> \doublecap (mathabx)
18216 % U+22D3 DOUBLE UNION; \Cup (AmS)
18217 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
18218 %* \textCup -> \doublecup (mathabx)
18219 % U+22D4 PITCHFORK; \pitchfork (mathabx)
18220 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
18221 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
18222 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
18223 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
18224 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
18225 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
18226 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
18227 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
18228 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
18229 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
18230 % \lesseqgtr (AmS)
18231 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
18232 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
18233 % \gtreqless (AmS)
18234 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
18235 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
18236 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
18237 % \ncurlyeqprec (mathabx)
18238 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
18239 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
18240 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
18241 % \ncurlyeqsucc (mathabx)
18242 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
18243 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
18244 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
18245 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
18246 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
18247 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
fonts/pxfonts)
18248 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
18249 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
fonts/pxfonts)
18250 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
18251 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
18252 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
18253 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
18254 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
abx)
18255 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
18256 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
18257 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
18258 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
18259 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
18260 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
18261 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precsim (AmS)

18262 \DeclareTextCommand{\textprecsim}{PU}{\9042\350}%* U+22E8
 18263 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succsim (AmS)
 18264 \DeclareTextCommand{\textsuccsim}{PU}{\9042\351}%* U+22E9
 18265 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
 18266 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
 18267 %* \textntriangleleft -> \nlessclosed (MnSymbol)
 18268 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright (AmS)
 18269 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
 18270 %* \textntriangleright -> \ngtrclosed (MnSymbol)
 18271 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
 18272 % \ntrianglelefteq (AmS)
 18273 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
 18274 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
 18275 % \ntrianglerighteq (AmS)
 18276 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
 18277 %* \textntrianglerighteq -> \textngeqclosed
 18278 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
 18279 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
 18280 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
 18281 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
 18282 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
 18283 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
 18284 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 18285 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 18286 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 18287 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

46.2.23 Miscellaneous Technical: U+2300 to U+23FF

18288 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 18289 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 18290 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 18291 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 18292 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 18293 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311
 18294 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 18295 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 18296 % U+231A WATCH; \clock (wasysym)
 18297 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 18298 %* \textclock -> \Clocklogo (marvosym)
 18299 %* \textclock -> \ClockLogo (marvosym)
 18300 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 18301 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 18302 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 18303 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 18304 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 18305 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 18306 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 18307 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 18308 % U+2322 FROWN; \frown (LaTeX)
 18309 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 18310 % U+2323 SMILE; \smile (LaTeX)
 18311 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 18312 % U+2328 KEYBOARD; \Keyboard (marvosym)

18313 `\DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328`
18314 `% U+2329 LEFT-POINTING ANGLE BRACKET; angleleft; \langle (LaTeX)`
18315 `\DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329`
18316 `% U+232A RIGHT-POINTING ANGLE BRACKET; angleright; \rangle (LaTeX)`
18317 `\DeclareTextCommand{\textrightangle}{PU}{\9043\052}%* U+232A`
18318 `% U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)`
18319 `\DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339`
18320 `% U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)`
18321 `\DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C`
18322 `% U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)`
18323 `\DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D`
18324 `%* \textstmaryrdbaro -> \baro (stmaryrd)`
18325 `% U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)`
18326 `\DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F`
18327 `% U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;`
18328 `% \notbackslash (wasysym)`
18329 `\DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340`
18330 `% U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)`
18331 `\DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342`
18332 `% U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;`
18333 `% \APLleftarrowbox (wasysym)`
18334 `\DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347`
18335 `% U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;`
18336 `% \APLrightarrowbox (wasysym)`
18337 `\DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348`
18338 `% U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)`
18339 `\DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350`
18340 `% U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;`
18341 `% \APLdownarrowbox (wasysym)`
18342 `\DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357`
18343 `% U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;`
18344 `% \APLinput (wasysym)`
18345 `\DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E`
18346 `% U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)`
18347 `\DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370`
18348 `% U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)`
18349 `\DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393`
18350 `% U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)`
18351 `\DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394`
18352 `% U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)`
18353 `\DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395`
18354 `% U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;`
18355 `% \ForwardToIndex (marvosym)`
18356 `\DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED`
18357 `% U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;`
18358 `% \RewindToIndex (marvosym)`
18359 `\DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE`

46.2.24 Control Pictures: U+2400 to U+243F

18360 % U+2422 BLANK SYMBOL
18361 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
18362 % U+2423 OPEN BOX; blank
18363 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

46.2.25 Optical Character Recognition: U+2440 to U+245F

18364 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
18365 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
18366 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

46.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

18367 % U+2460 CIRCLED DIGIT ONE; onecircle
18368 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
18369 % U+2461 CIRCLED DIGIT TWO; twocircle
18370 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
18371 % U+2462 CIRCLED DIGIT THREE; threecircle
18372 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
18373 % U+2463 CIRCLED DIGIT FOUR; fourcircle
18374 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
18375 % U+2464 CIRCLED DIGIT FIVE; fivecircle
18376 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
18377 % U+2465 CIRCLED DIGIT SIX; sixcircle
18378 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
18379 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
18380 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
18381 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
18382 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
18383 % U+2468 CIRCLED DIGIT NINE; ninecircle
18384 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
18385 % U+2469 CIRCLED NUMBER TEN; tencircle
18386 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
18387 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
18388 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
18389 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
18390 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
18391 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
18392 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
18393 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
18394 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
18395 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
18396 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
18397 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
18398 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
18399 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
18400 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
18401 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
18402 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
18403 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
18404 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
18405 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
18406 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
18407 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
18408 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
18409 % \CircledA (marvosym)


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18410 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
18411 %* \textCircledA -> \CleaningA
18412 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
18413 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
18414 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
18415 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
18416 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
18417 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
18418 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
18419 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
18420 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
18421 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
18422 % \CleaningF (marvosym)
18423 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
18424 % \CleaningFF (marvosym)
18425 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
18426 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
18427 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
18428 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
18429 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
18430 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
18431 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
18432 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
18433 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
18434 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
18435 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
18436 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
18437 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
18438 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
18439 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
18440 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
18441 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
18442 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
18443 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
18444 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
18445 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
18446 % \CleaningP (marvosym)
18447 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
18448 % \CleaningPP (marvosym)
18449 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
18450 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
18451 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
18452 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
18453 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
18454 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
18455 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
18456 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
18457 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
18458 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
18459 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
18460 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
18461 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
18462 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
18463 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC

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18464 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
18465 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
18466 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
18467 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
18468 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
18469 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
18470 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
18471 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
18472 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
18473 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
18474 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
18475 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
18476 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
18477 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
18478 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
18479 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
18480 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
18481 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
18482 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
18483 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
18484 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
18485 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
18486 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
18487 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
18488 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
18489 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
18490 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
18491 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
18492 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
18493 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
18494 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
18495 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
18496 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
18497 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
18498 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
18499 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
18500 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
18501 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
18502 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
18503 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
18504 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
18505 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
18506 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
18507 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
18508 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
18509 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
18510 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
18511 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
18512 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
18513 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
18514 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
18515 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
18516 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
18517 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7

18518 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
18519 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
18520 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
18521 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
18522 % U+24EA CIRCLED DIGIT ZERO
18523 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

46.2.27 Box Drawing: U+2500 to 257F

18524 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
Line (marvosym)
18525 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
18526 %* \textCuttingLine -> \Kutline (marvosym)
18527 %* \textCuttingLine -> \CutLine (marvosym)
18528 %* \textCuttingLine -> \Cutline (marvosym)

46.2.28 Geometric Shapes: U+25A0 to U+25FF

18529 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
18530 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
18531 %* \textUParrow -> \MoveUp (marvosym)
18532 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
18533 % \bigtriangleup (LaTeX)
18534 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
18535 %* \textbigtriangleup -> \APLup (wasysym)
18536 %* \textbigtriangleup -> \Bleech (marvosym)
18537 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
18538 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
18539 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
18540 % whiterightpointingtriangle; \triangleright (LaTeX)
18541 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
18542 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
18543 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
18544 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
18545 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
18546 %* \textDOWNarrow -> \MoveDown (marvosym)
18547 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
angle;
18548 % \bigtriangledown (LaTeX)
18549 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
18550 %* \textbigtriangledown -> \APLdown (wasysym)
18551 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
18552 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
18553 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
18554 % whiteleftpointingtriangle; \triangleleft (LaTeX)
18555 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
18556 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
18557 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
18558 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
18559 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
18560 %* \textdiamond -> \Diamond (wasysym)
18561 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
18562 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
18563 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)

18564 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
 18565 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
 18566 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
 18567 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 18568 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
 18569 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
 18570 % \boxbar (stmaryrd)
 18571 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
 18572 % U+25EF LARGE CIRCLE; largecircle
 18573 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
 18574 %* \textbigcircle -> \varbigcirc (stmaryrd)
 18575 %

46.2.29 Miscellaneous Symbols: U+2600 to U+26FF

18576 % U+2601 CLOUD; \Cloud (ifsym)
 18577 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
 18578 % U+2605 BLACK STAR; \FiveStar (bbding)
 18579 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
 18580 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
 18581 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
 18582 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
 18583 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
 18584 %* \textPhone -> \Telefon (marvosym)
 18585 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
 18586 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
 18587 %* \textboxempty -> \Box (wasysym)
 18588 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
 18589 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
 18590 %* \textCheckedbox -> \CheckedBox (marvosym)
 18591 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
 18592 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
 18593 %* \textCrossedbox -> \XBox (wasysym)
 18594 %* \textCrossedbox -> \CrossedBox (marvosym)
 18595 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
 18596 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
 18597 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bbding)
 18598 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
 18599 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bbding)
 18600 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
 18601 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bbding)
 18602 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
 18603 %* \textHandLeft -> \rightpointleft (fourier)
 18604 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
 18605 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
 18606 %* \textHandRight -> \leftpointright (fourier)
 18607 %* \textHandRight -> \PointingHand (marvosym)
 18608 %* \textHandRight -> \Pointinghand (marvosym)
 18609 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
 18610 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
 18611 %* \textRadioactivity -> \Radiation (ifsym)
 18612 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
 18613 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
 18614 % U+2625 ANKH; \Ankh (marvosym)
 18615 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625

18616 % U+262F YIN YANG; \YinYang (marvosym)
18617 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
18618 %* \textYinYang -> \Yinyang (marvosym)
18619 %* \textYinYang -> \YingYang (marvosym)
18620 %* \textYinYang -> \Yingyang (marvosym)
18621 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
18622 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
18623 %* \textfrownie -> \Frowny (marvosym)
18624 % U+263A WHITE SMILING FACE; \smiley (wasysym)
18625 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
18626 %* \textsmiley -> \Smiley (marvosym)
18627 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
18628 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
18629 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
18630 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
18631 %* \textsun -> \Sun (marvosym)
18632 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
18633 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
18634 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
18635 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
18636 % U+263F MERCURY; \mercury (wasysym)
18637 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
18638 %* \textmercury -> \Mercury (marvosym)
18639 % U+2640 FEMALE SIGN; female; \female (wasysym)
18640 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
18641 %* \textPUfemale -> \textfemale (tipx)
18642 %* \textPUfemale -> \female (wasysym)
18643 %* \textPUfemale -> \venus (wasysym)
18644 %* \textPUfemale -> \Venus (marvosym)
18645 %* \textPUfemale -> \Female (marvosym)
18646 % U+2641 EARTH; \earth (wasysym)
18647 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
18648 %* \textearth -> \Earth (marvosym)
18649 % U+2642 MALE SIGN; male, mars; \male (wasysym)
18650 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
18651 %* \textmale -> \mars (wasysym)
18652 %* \textmale -> \Mars (marvosym)
18653 %* \textmale -> \Male (marvosym)
18654 % U+2643 JUPITER; \jupiter (wasysym)
18655 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
18656 %* \textjupiter -> \Jupiter (marvosym)
18657 % U+2644 SATURN; \saturn (wasysym)
18658 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
18659 %* \textsaturn -> \Saturn (marvosym)
18660 % U+2645 URANUS; \uranus (wasysym)
18661 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
18662 %* \texturanus -> \Uranus (marvosym)
18663 % U+2646 NEPTUNE; \neptune (wasysym)
18664 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
18665 %* \textneptune -> \Neptune (marvosym)
18666 % U+2647 PLUTO; \pluto (wasysym)
18667 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
18668 %* \textpluto -> \Pluto (marvosym)
18669 % U+2648 ARIES; \aries (wasysym)

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18670 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
18671 %* \textaries -> \Aries (marvosym)
18672 % U+2649 TAURUS; \taurus (wasysym)
18673 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
18674 %* \texttaurus -> \Taurus (marvosym)
18675 % U+264A GEMINI; \gemini (wasysym)
18676 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
18677 %* \textgemini -> \Gemini (marvosym)
18678 % U+264B CANCER; \cancer (wasysym)
18679 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
18680 %* \textcancer -> \Cancer (marvosym)
18681 % U+264C LEO; \leo (wasysym)
18682 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
18683 %* \textleo -> \Leo (marvosym)
18684 % U+264D VIRGO; \virgo (wasysym)
18685 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
18686 %* \textvirgo -> \Virgo (marvosym)
18687 % U+264E LIBRA; \libra (wasysym)
18688 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
18689 %* \textlibra -> \Libra (marvosym)
18690 % U+264F SCORPIO; \scorpio (wasysym)
18691 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
18692 %* \textscorpio -> \Scorpio (marvosym)
18693 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
18694 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
18695 %* \textsagittarius -> \Sagittarius (marvosym)
18696 % U+2651 CAPRICORN; \capricornus (wasysym)
18697 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
18698 %* \textcapricornus -> \Capricorn (marvosym)
18699 % U+2652 AQUARIUS; \aquarius (wasysym)
18700 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
18701 %* \textaquarius -> \Aquarius (marvosym)
18702 % U+2653 PISCES; \pisces (wasysym)
18703 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
18704 %* \textpisces -> \Pisces (marvosym)
18705 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
18706 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
18707 %* \textspadesuitblack -> \spadesuit (MnSymbol)
18708 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
18709 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
18710 %* \textheartsuitwhite -> \Heart (marvosym)
18711 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
18712 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
18713 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
18714 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
18715 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
18716 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
18717 %* \textclubsuitblack -> \clubsuit (MnSymbol)
18718 % U+2664 WHITE SPADE SUIT; spadesuitwhite
18719 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
18720 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
18721 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
18722 % U+2666 BLACK DIAMOND SUIT; diamond
18723 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666

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18724 % U+2667 WHITE CLUB SUIT; clubsuitwhite
18725 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
18726 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
18727 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
18728 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
18729 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
18730 %* \textmusicalnote -> \eighthnote (wasysym, arev)
18731 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
18732 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
18733 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
18734 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
18735 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
18736 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
18737 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
18738 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
18739 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
18740 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
18741 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
18742 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
18743 %* \textrecycle -> \Recycling (marvosym)
18744 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
18745 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
18746 % U+2691 BLACK FLAG; \Flag (ifsym)
18747 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
18748 %* \textFlag -> \VarFlag (ifsym)
18749 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
18750 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
18751 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
18752 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
18753 %* \textdsmilitary -> \textxswup (fourier)
18754 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
18755 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
18756 % U+2696 SCALES; \dsjuridical (dictsym)
18757 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
18758 % U+2697 ALEMBIC; \dschemical (dictsym)
18759 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
18760 % U+2698 FLOWER; \dsbiological (dictsym)
18761 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
18762 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
18763 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
18764 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
18765 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
18766 % U+26A0 WARNING SIGN; \danger (fourier)
18767 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
18768 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
18769 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
18770 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
18771 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
18772 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-
vosym)
18773 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
18774 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
18775 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5

18776 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
18777 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
18778 % U+26AD MARRIAGE SYMBOL
18779 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
18780 % U+26AE DIVORCE SYMBOL
18781 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
18782 % U+26B2 NEUTER; \textunconfemale (tipx)
18783 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}% U+26B2
18784 %* \textPUunconfemale -> \textunconfemale (tipx)
18785 % U+26B9 SEXTILE; \hexstar (wasysym)
18786 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
18787 % U+26BD SOCCER BALL; \Football (marvosym)
18788 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
18789 %* \textSoccerBall -> \Football (marvosym)
18790 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
18791 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
18792 % U+26C6 RAIN; \Rain (ifsym)
18793 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
18794 % U+26D4 NO ENTRY; \noway (fourier)
18795 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
18796 % U+26F0 MOUNTAIN; \Mountain (ifsym)
18797 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
18798 % U+26FA TENT; \Tent (ifsym)
18799 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

46.2.30 Dingbats: U+2700 to U+27BF

18800 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
18801 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
18802 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
18803 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
18804 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
18805 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
18806 %* \textScissorRight -> \RightScissors (marvosym)
18807 %* \textScissorRight -> \Leftscissors (marvosym)
18808 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
18809 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
18810 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
18811 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
18812 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
18813 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
18814 % U+2707 TAPE DRIVE; \Tape (bding)
18815 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
18816 % U+2708 AIRPLANE; \Plane (bding)
18817 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
18818 % U+2709 ENVELOPE; \Envelope (bding),
18819 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
18820 %* \textEnvelope -> \Letter (marvosym)
18821 % U+270C VICTORY HAND; \Peace (bding)
18822 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
18823 % U+270D WRITING HAND; \WritingHand (marvosym)
18824 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
18825 %* \textWritingHand -> \Writinghand (marvosym)
18826 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
18827 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E

18828 % U+270F PENCIL; \PencilRight (bding)
18829 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
18830 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
18831 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
18832 % U+2711 WHITE NIB; \NibRight (bding)
18833 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
18834 % U+2712 BLACK NIB; \NibSolidRight (bding)
18835 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
18836 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
18837 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
18838 %* \textCheckmark -> \checkmark (MnSymbol)
18839 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
18840 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
18841 % U+2715 MULTIPLICATION X; \XSolid (bding)
18842 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
18843 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
18844 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
18845 % U+2717 BALLOT X; \XSolidBrush (bding)
18846 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
18847 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
18848 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
18849 % U+271A HEAVY GREEK CROSS; \Plus (bding)
18850 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
18851 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
18852 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
18853 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
18854 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
18855 % U+271D LATIN CROSS; \Cross (bding)
18856 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
18857 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
18858 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
18859 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
18860 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
18861 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
18862 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
18863 % U+2721 STAR OF DAVID; \DavidStar (bding)
18864 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
18865 %* \textDavidStar -> \davidstar (wasysym)
18866 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
18867 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
18868 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
18869 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
18870 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
18871 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
18872 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
18873 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
18874 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
18875 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
18876 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
18877 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
18878 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
18879 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
18880 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)

18881 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
18882 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
18883 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
18884 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
18885 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
18886 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
18887 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
18888 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
18889 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
18890 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
18891 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
18892 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
18893 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
18894 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
18895 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
18896 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
18897 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
18898 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
18899 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
18900 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
18901 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
18902 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
18903 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
18904 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
18905 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
18906 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
18907 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
18908 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
18909 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
18910 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
18911 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
18912 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
18913 % \SixFlowerOpenCenter (bding)
18914 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
18915 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
18916 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
18917 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
18918 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
18919 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
18920 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
18921 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
18922 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
18923 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
18924 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
18925 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
18926 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
18927 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)

18928 `\DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743`
18929 `% U+2744 SNOWFLAKE; \SnowflakeChevron (bding)`
18930 `\DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744`
18931 `% U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)`
18932 `\DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745`
18933 `% U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)`
18934 `\DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746`
18935 `% U+2747 SPARKLE; \Sparkle (bding)`
18936 `\DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747`
18937 `% U+2748 HEAVY SPARKLE; \SparkleBold (bding)`
18938 `\DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748`
18939 `% U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)`
18940 `\DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749`
18941 `% U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;`
18942 `% \EightFlowerPetalRemoved (bding)`
18943 `\DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A`
18944 `% U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;`
18945 `% \EightAsterisk (bding)`
18946 `\DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B`
18947 `% U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)`
18948 `\DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D`
18949 `% U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;`
18950 `% \SquareShadowBottomRight (bding)`
18951 `\DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F`
18952 `% U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;`
18953 `% \SquareShadowTopRight (bding)`
18954 `\DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750`
18955 `% U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;`
18956 `% \SquareCastShadowBottomRight (bding)`
18957 `\DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751`
18958 `% U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;`
18959 `% \SquareCastShadowTopRight (bding)`
18960 `\DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752`
18961 `% U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (b-`
18962 `ding)`
18963 `\DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756`
18964 `% U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)`
18964 `\DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758`
18965 `% U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)`
18966 `\DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759`
18967 `% U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)`
18968 `\DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A`

46.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

18969 `% U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)`
18970 `\DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2`
18971 `% \notperp (mathabx)`
18972 `\DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338`
18973 `% U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)`
18974 `\DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7`
18975 `% U+27D1 AND WITH DOT; \wedgedot (MnSymbol)`
18976 `\DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1`
18977 `% U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)`
18978 `\DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC`

18979 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
18980 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
18981 %* \textlbrackdbl -> \lbracket (stmaryrd)
18982 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
18983 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
18984 %* \textrbrackdbl -> \rrbracket (stmaryrd)

46.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

18985 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
18986 % \circlearrowleft (AmS)
18987 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
18988 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
18989 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
18990 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
18991 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
18992 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
18993 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
18994 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
18995 \DeclareTextCommand{\textlonglefttrightarrow}{PU}{\9047\367}%* U+27F7
18996 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
18997 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
18998 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
18999 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
19000 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longlefttrightarrow (AmS)
19001 \DeclareTextCommand{\textLonglefttrightarrow}{PU}{\9047\372}%* U+27FA
19002 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
19003 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
19004 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
from (stmaryrd)
19005 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
19006 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
sto (stmaryrd)
19007 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

46.2.33 Supplemental Arrows-B: U+2900 to U+297F

19008 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
bol)
19009 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
19010 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
bol)
19011 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
19012 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
19013 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
19014 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
19015 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
19016 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
19017 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
19018 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
19019 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
19020 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
19021 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
19022 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
19023 % \rcurvearrowne (MnSymbol)
19024 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934

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19025 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
WARDS;
19026 % \lcurvearrowse (MnSymbol)
19027 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
19028 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
WARDS;
19029 % \lcurvearrowsw (MnSymbol)
19030 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
19031 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
WARDS;
19032 % \rcurvearrowse (MnSymbol)
19033 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
19034 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
Symbol)
19035 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
19036 %* \textlcurvearrowdown -> \RightTorque (marvosym)
19037 %* \textlcurvearrowdown -> \Righttorque (marvosym)
19038 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
19039 % \rcurvearrowdown (MnSymbol)
19040 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
19041 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
19042 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
19043 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
bol)
19044 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
19045 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
19046 % \rcurvearrowright (MnSymbol)
19047 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
19048 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
poon (mathabx)
19049 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
19050 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
poon (mathabx)
19051 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
19052 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
19053 % \updownharpoonrightleft (MnSymbol)
19054 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
19055 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
19056 % \updownharpoonleftright (MnSymbol)
19057 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
19058 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
19059 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
19060 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
19061 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
19062 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
19063 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
19064 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
WARDS HARPOON
19065 % WITH BARB DOWN; \rightrightarpoons (mathabx)
19066 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
19067 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
WARDS HARPOON
19068 % WITH BARB RIGHT; \downdownharpoons (mathabx)
19069 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965

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19070 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 19071 % \leftbarharpoon (mathabx)
 19072 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 19073 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 19074 % LONG DASH; \barleftharpoon (mathabx)
 19075 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 19076 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 19077 % LONG DASH; \rightbarharpoon (mathabx)
 19078 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 19079 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 19080 % LONG DASH; \barrightharpoon (mathabx)
 19081 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 19082 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 19083 % WITH BARB RIGHT; \updownharpoons (mathabx)
 19084 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 19085 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 19086 % WITH BARB RIGHT; \downupharpoons (mathabx)
 19087 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 19088 % U+297F DOWN FISH TAIL
 19089 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

46.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

19090 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 19091 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 19092 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 19093 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 19094 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 19095 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 19096 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 19097 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 19098 %* \textobar -> \textvarobar (stmaryrd)
 19099 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 19100 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 19101 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 19102 %* \textobslash -> \obackslash (mathabx)
 19103 %* \textobslash -> \varobslash (stmaryrd)
 19104 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 19105 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 19106 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 19107 %* \textobot -> \odplus (ulsy)
 19108 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 19109 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 19110 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 19111 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 19112 %* \textolessthan -> \varolessthan (stmaryrd)
 19113 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 19114 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 19115 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 19116 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 19117 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 19118 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)

19119 \DeclareTextCommand{\textboxslash}{PU}{\9051\305}%* U+29C5
 19120 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 19121 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 19122 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 19123 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 19124 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 19125 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 19126 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 19127 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 19128 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 19129 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 19130 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 19131 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

46.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

19132 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 19133 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 19134 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 19135 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 19136 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 19137 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 19138 % U+2A1D JOIN; \Join (latexsym, amssymb, mathabx, txfonts,
 19139 % pxfonts, wasysym)
 19140 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 19141 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 19142 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 19143 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \cirplus (mathabx)
 19144 \DeclareTextCommand{\textcirplus}{PU}{\9052\042}%* U+2A22
 19145 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 19146 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 19147 %* \textminusdot -> \divdot (mathabx)
 19148 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 19149 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 19150 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 19151 % \dtimes (mathdesign)
 19152 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 19153 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 19154 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 19155 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 19156 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 19157 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 19158 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 19159 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 19160 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 19161 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 19162 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 19163 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 19164 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 19165 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 19166 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 19167 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 19168 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 19169 %* \textdoublevee -> \merge (stmaryrd)
 19170 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;

19171 % \doublebarwedge (AmS)
19172 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
19173 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
19174 % \veedoublebar (mahtabx)
19175 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
19176 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
19177 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
19178 % \neqdot (MnSymbol)
19179 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
19180 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
19181 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
19182 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
19183 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
19184 % \nleqslant (txfonts/pxfonts)
19185 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
19186 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
19187 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
19188 % \ngeqslant (txfonts/pxfonts)
19189 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
19190 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
19191 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
19192 % \nlessapprox (txfonts/pxfonts)
19193 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
19194 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
19195 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
19196 % \ngtrapprox (txfonts/pxfonts)
19197 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
19198 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
19199 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
19200 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
19201 % \gneq (AmS)
19202 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
19203 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
19204 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
19205 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
19206 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
19207 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
THAN;
19208 % \lesseqgtr (AmS)
19209 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
19210 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
THAN;
19211 % \gtreqless (AmS)
19212 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
19213 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
19214 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
19215 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
19216 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
19217 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
19218 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
19219 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
19220 \DeclareTextCommand{\textrightslice}{PU}{\9052\247}%* U+2AA7
19221 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
Symbol)


```

19222 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
19223 % \npreceq (txfonts/pxfonts)
19224 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
19225 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
Symbol)
19226 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
19227 % \nsucceq (txfonts/pxfonts)
19228 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
19229 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \preceq (mathabx)
19230 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
19231 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succneq (mathabx)
19232 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
19233 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
19234 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
19235 % \npreceqq (txfonts/pxfonts)
19236 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
19237 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
19238 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
19239 % \nsucceqq (txfonts/pxfonts)
19240 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
19241 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
19242 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
19243 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
19244 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
19245 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
19246 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
19247 % \nprecapprox (txfonts/pxfonts)
19248 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
19249 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
19250 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
19251 % \nsuccapprox (txfonts/pxfonts)
19252 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
19253 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnapprox (AmS)
19254 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
19255 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnapprox (AmS)
19256 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
19257 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
19258 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
19259 % \nsubseteqq (txfonts/pxfonts, mathabx)
19260 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
19261 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
19262 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
19263 % \nsupseteqq (mathabx)
19264 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
19265 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
19266 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
19267 %* \textdashV -> \leftVdash (MnSymbol)
19268 % \ndashV (mathabx)
19269 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
19270 %* \textndashV -> \nleftVdash (MnSymbol)

```

19271 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 19272 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 19273 %* \textDashv -> \leftmodels (MnSymbol)
 19274 % \nDashv (mathabx)
 19275 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 19276 %* \textnDashv -> \leftmodels (MnSymbol)
 19277 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 19278 % \DashV (mathabx)
 19279 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 19280 %* \textDashV -> \leftModels (MnSymbol)
 19281 % \nDashV (mathabx)
 19282 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 19283 %* \textnDashV -> \leftModels (MnSymbol)
 19284 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 19285 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 19286 % \ndownmodels (MnSymbol)
 19287 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 19288 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 19289 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 19290 % \nupmodels (MnSymbol)
 19291 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 19292 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 19293 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 19294 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 19295 % \interleave (stmaryrd)
 19296 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 19297 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 19298 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 19299 %* \textsslash -> \varparallel (txfonts\pxfonts)

46.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

19300 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 19301 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 19302 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 19303 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

46.2.37 Latin Extended-C: U+2C60 to U+2C7F

19304 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 19305 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

46.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

19306 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 19307 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 19308 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 19309 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 19310 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 19311 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

46.2.39 Modifier Tone Letters: U+A700 to U+A71F

19312 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 19313 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 19314 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 19315 % \textdownstep (tipa)
 19316 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

46.2.40 Latin Extended-D: U+A720 to U+A7FF

```
19317 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
19318 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
19319 %* \textPUheng -> \textheng (tipx)
19320 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
19321 \DeclareTextCommand{\textPUlhookfour}{PU}{\9247\054}% U+A72C
19322 %* \textPUlhookfour -> \textlhookfour (tipx)
19323 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
19324 \DeclareTextCommand{\textPUScf}{PU}{\9247\060}% U+A730
19325 %* \textPUScf -> \textscf (tipx)
19326 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
19327 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
19328 %* \textPUaolig -> \textao lig (tipx)
19329 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
19330 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
19331 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
19332 \DeclareTextCommand{\textcircumlw}{PU}{\9247\210}% U+A788
```

46.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

```
19333 % U+FB01 LATIN SMALL LIGATURE FI; fi
19334 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
19335 % U+FB02 LATIN SMALL LIGATURE FL; fl
19336 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

46.2.42 Musical Symbols: U+1D100 to U+1D1FF

```
19337 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
19338 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
19339 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
19340 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
19341 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
19342 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
19343 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
19344 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
19345 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
19346 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
19347 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
19348 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
19349 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
19350 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
19351 %* \textfullnote -> \Ganz (harmony)
19352 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
19353 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
19354 %* \texthalfnote -> \Halb (harmony)
19355 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
19356 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
19357 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
19358 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
19359 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
19360 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
19361 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
19362 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162
```

46.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

19363 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
19364 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
19365 % U+1F319 CRESCENT MOON; \Moon (marvosym)
19366 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
19367 % U+1F468 MAN; \ManFace (marvosym)
19368 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
19369 % U+1F469 WOMAN; \WomanFace (marvosym)
19370 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
19371 %* \textWomanFace -> \Womanface (marvosym)
19372 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
19373 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
19374 %* \textFax -> \Faxmachine (marvosym)
19375 % U+1F525 FIRE; \Fire (ifsym)
19376 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

46.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

19377 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
19378 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
19379 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
19380 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
19381 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
19382 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

46.2.45 Miscellaneous

19383 \DeclareTextCommand{\SS}{PU}{SS}%
19384 % \textcopyleft (textcomp)
19385 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
19386 % \ccnc (ccllicenses)
19387 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
19388 % \ccnd (ccllicenses)
19389 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
19390 % \ccsa (ccllicenses)
19391 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
19392 % \Info (marvosym, china2e)
19393 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
19394 % \CESign (marvosym)
19395 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
19396 %* \textCESign -> \CESign (marvosym)

46.2.46 Aliases

Aliases (german.sty)

19397 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
19398 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
19399 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
19400 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
19401 \DeclareTextCommand{\textflqq}{PU}{\guillemetleft}%
19402 \DeclareTextCommand{\textfrqq}{PU}{\guillemetright}%
19403 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
19404 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

Aliases (math names)

19405 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
19406 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
19407 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*

```

19408 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
19409 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
19410 </puenc>

```

46.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

19411 (*puvnc)

19412 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
19413 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
19414 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
19415 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
19416 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
19417 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
19418 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
19419 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
19420 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
19421 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
19422 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
19423 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF

19424 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
19425 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
19426 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
19427 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
19428 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
19429 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
19430 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
19431 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
19432 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
19433 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
19434 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
19435 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
19436 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
19437 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
19438 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
19439 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
19440 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
19441 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
19442 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
19443 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
19444 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
19445 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
19446 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
19447 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
19448 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
19449 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
19450 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
19451 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
19452 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
19453 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
19454 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
19455 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD

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19456 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
19457 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
19458 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
19459 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
19460 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
19461 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
19462 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
19463 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
19464 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
19465 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
19466 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
19467 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
19468 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
19469 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
19470 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
19471 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
19472 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
19473 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
19474 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
19475 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
19476 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
19477 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
19478 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
19479 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
19480 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
19481 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
19482 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
19483 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
19484 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
19485 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
19486 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
19487 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
19488 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
19489 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
19490 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
19491 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
19492 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
19493 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
19494 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
19495 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
19496 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
19497 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
19498 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EA
19499 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
19500 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
19501 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
19502 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
19503 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
19504 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
19505 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
19506 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
19507 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
19508 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
19509 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD

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19510 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
19511 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
19512 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
19513 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
19514 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
19515 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
19516 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
19517 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
19518 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
19519 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
19520 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
19521 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
19522 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
19523 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
19524 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
19525 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
19526 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
19527 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
19528 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
19529 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
19530 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
19531 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
19532 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
19533 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
19534 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
19535 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
19536 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
19537 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
19538 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
19539 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
19540 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
19541 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
19542 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
19543 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
19544 </p>

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46.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

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19545 (*puarenc)
19546 % U+0621;afii57409;ARABIC LETTER HAMZA
19547 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
19548 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
19549 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
19550 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
19551 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
19552 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
19553 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
19554 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
19555 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
19556 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
19557 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
19558 % U+0627;afii57415;ARABIC LETTER ALEF

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19559 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
19560 % U+0628;afii57416;ARABIC LETTER BEH
19561 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
19562 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
19563 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
19564 % U+062A;afii57418;ARABIC LETTER TEH
19565 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
19566 % U+062B;afii57419;ARABIC LETTER THEH
19567 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
19568 % U+062C;afii57420;ARABIC LETTER JEEM
19569 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
19570 % U+062D;afii57421;ARABIC LETTER HAH
19571 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
19572 % U+062E;afii57422;ARABIC LETTER KHAH
19573 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
19574 % U+062F;afii57423;ARABIC LETTER DAL
19575 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
19576 % U+0630;afii57424;ARABIC LETTER THAL
19577 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
19578 % U+0631;afii57425;ARABIC LETTER REH
19579 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
19580 % U+0632;afii57426;ARABIC LETTER ZAIN
19581 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
19582 % U+0633;afii57427;ARABIC LETTER SEEN
19583 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
19584 % U+0634;afii57428;ARABIC LETTER SHEEN
19585 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
19586 % U+0635;afii57429;ARABIC LETTER SAD
19587 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
19588 % U+0636;afii57430;ARABIC LETTER DAD
19589 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
19590 % U+0637;afii57431;ARABIC LETTER TAH
19591 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
19592 % U+0638;afii57432;ARABIC LETTER ZAH
19593 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
19594 % U+0639;afii57433;ARABIC LETTER AIN
19595 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
19596 % U+063A;afii57434;ARABIC LETTER GHAIN
19597 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
19598 % U+0640;afii57440;ARABIC TATWEEL
19599 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
19600 % U+0641;afii57441;ARABIC LETTER FEH
19601 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
19602 % U+0642;afii57442;ARABIC LETTER QAF
19603 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
19604 % U+0643;afii57443;ARABIC LETTER KAF
19605 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
19606 % U+0644;afii57444;ARABIC LETTER LAM
19607 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
19608 % U+0645;afii57445;ARABIC LETTER MEEM
19609 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
19610 % U+0646;afii57446;ARABIC LETTER NOON
19611 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
19612 % U+0647;afii57470;ARABIC LETTER HEH

19613 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
19614 % U+0648;afi57448;ARABIC LETTER WAW
19615 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
19616 % U+0649;afi57449;ARABIC LETTER ALEF MAKSURA
19617 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
19618 % U+064A;afi57450;ARABIC LETTER YEH
19619 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

19620 % U+064B;afi57451;ARABIC FATHATAN
19621 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
19622 % U+064C;afi57452;ARABIC DAMMATAN
19623 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
19624 % U+064D;afi57453;ARABIC KASRATAN
19625 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
19626 % U+064E;afi57454;ARABIC FATHA
19627 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
19628 % U+064F;afi57455;ARABIC DAMMA
19629 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
19630 % U+0650;afi57456;ARABIC KASRA
19631 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
19632 % U+0651;afi57457;ARABIC SHADDA
19633 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
19634 % U+0652;afi57458;ARABIC SUKUN
19635 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

Farsi
19636 % U+067E ARABIC LETTER PEH; afi57506
19637 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
19638 % U+0686 ARABIC LETTER TCHEH; afi57507
19639 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
19640 % U+0698 ARABIC LETTER JEH; afi57508
19641 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
19642 % U+06A9 ARABIC LETTER KEHEH
19643 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
19644 % U+06AF ARABIC LETTER GAF; afi57509
19645 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
19646 % U+06CC ARABIC LETTER FARSI YEH
19647 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

19648 % U+200C ZERO WIDTH NON-JOINER; afi61664
19649 \DeclareTextCommand{\ZWJ}{PU}{\9040\014}% U+200C
19650 % U+200D ZERO WIDTH JOINER; afi301
19651 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

19652 </puarenc>
19653 < *psdextra >
19654 \Hy@VersionCheck{psdextra.def}
19655 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
19656 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
19657 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
19658 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
19659 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
19660 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
19661 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
19662 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
19663 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6

19664 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
19665 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
19666 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
19667 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
19668 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
19669 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
19670 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
19671 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
19672 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
19673 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
19674 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
19675 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
19676 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
19677 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
19678 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
19679 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
19680 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
19681 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
19682 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
19683 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
19684 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
19685 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
19686 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
19687 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
19688 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
19689 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
19690 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
19691 \newcommand*{\psdmapshortnames}{%
19692 \let\MVPlus\textMVPlus
19693 \let\MVComma\textMVComma
19694 \let\MVMinus\textMVMinus
19695 \let\MVPeriod\textMVPeriod
19696 \let\MVDivision\textMVDivision
19697 \let\MVZero\textMVZero
19698 \let\MVOne\textMVOne
19699 \let\MVTwo\textMVTwo
19700 \let\MVThree\textMVThree
19701 \let\MVFour\textMVFfour
19702 \let\MVFive\textMVFfive
19703 \let\MVSix\textMVSix
19704 \let\MVSeven\textMVSeven
19705 \let\MVEight\textMVEight
19706 \let\MVNine\textMVNine
19707 \let\MVAt\textMVAt
19708 \let\copyright\textcopyright
19709 \let\twosuperior\texttwosuperior
19710 \let\threesuperior\textthreesuperior
19711 \let\onesuperior\textonesuperior
19712 \let\Thorn\textThorn
19713 \let\thorn\textthorn
19714 \let\hbar\texthbar
19715 \let\hausasB\texthausasB
19716 \let\hausasD\texthausasD
19717 \let\hausasK\texthausasK

19718 \let\barl\textbarl
19719 \let\inve\textinve
19720 \let\slashc\textslashc
19721 \let\scripta\textscripta
19722 \let\openo\textopeno
19723 \let\rtaild\textrtaild
19724 \let\reve\textreve
19725 \let\schwa\textscha
19726 \let\niepsilon\textniepsilon
19727 \let\repsilon\textrepsilon
19728 \let\rhookrepsilon\texthookrepsilon
19729 \let\scriptg\textscriptg
19730 \let\scg\textscg
19731 \let\ipagamma\textipagamma
19732 \let\babygamma\textbabygamma
19733 \let\bari\textbari
19734 \let\niiota\textniiota
19735 \let\sci\textsci
19736 \let\scn\textscn
19737 \let\niphi\textniphi
19738 \let\longlegr\textlonglegr
19739 \let\scr\textscr
19740 \let\invscr\textinvscr
19741 \let\esh\textesh
19742 \let\baru\textbaru
19743 \let\niupsilon\textniupsilon
19744 \let\scriptv\textscriptv
19745 \let\turnv\textturnv
19746 \let\turnw\textturnw
19747 \let\turny\textturny
19748 \let\scy\textscy
19749 \let\yogh\textyogh
19750 \let\glotstop\textglotstop
19751 \let\revglotstop\textrevglotstop
19752 \let\invglotstop\textinvglotstop
19753 \let\Gamma\textGamma
19754 \let\Delta\textDelta
19755 \let\Theta\textTheta
19756 \let\Lambda\textLambda
19757 \let\Xi\textXi
19758 \let\Pi\textPi
19759 \let\Sigma\textSigma
19760 \let\Upsilon\textUpsilon
19761 \let\Phi\textPhi
19762 \let\Psi\textPsi
19763 \let\Omega\textOmega
19764 \let\alpha\textalpha
19765 \let\beta\textbeta
19766 \let\gamma\textgamma
19767 \let\delta\textdelta
19768 \let\epsilon\textepsilon
19769 \let\zeta\textzeta
19770 \let\eta\texteta
19771 \let\theta\texttheta

19772 `\let\iota\textiota`
19773 `\let\kappa\textkappa`
19774 `\let\lambda\textlambda`
19775 `\let\mu\textmu`
19776 `\let\mugreek\textmugreek`
19777 `\let\nu\textnu`
19778 `\let\xi\textxi`
19779 `\let\pi\textpi`
19780 `\let\rho\textrho`
19781 `\let\varsigma\textvarsigma`
19782 `\let\sigma\textsigma`
19783 `\let\tau\texttau`
19784 `\let\upsilon\textupsilon`
19785 `\let\phi\textphi`
19786 `\let\chi\textchi`
19787 `\let\psi\textpsi`
19788 `\let\omega\textomega`
19789 `\let\scd\textscd`
19790 `\let\scu\textscu`
19791 `\let\iinferior\textiinferior`
19792 `\let\rinferior\textrinferior`
19793 `\let\uinferior\textuinferior`
19794 `\let\vinferior\textvinferior`
19795 `\let\betainferior\textbetainferior`
19796 `\let\gammainferior\textgammainferior`
19797 `\let\rhoinferior\textrhoinferior`
19798 `\let\phiinferior\textphiinferior`
19799 `\let\chiinferior\textchiinferior`
19800 `\let\barsci\textbarsci`
19801 `\let\barp\textbarp`
19802 `\let\barscu\textbarscu`
19803 `\let\htrtaild\texthtrtaild`
19804 `\let\dagger\textdagger`
19805 `\let\bullet\textbullet`
19806 `\let\hdotfor\texthdotfor`
19807 `\let\prime\textprime`
19808 `\let\second\textsecond`
19809 `\let\third\textthird`
19810 `\let\backprime\textbackprime`
19811 `\let\lefttherefore\textlefttherefore`
19812 `\let\fourth\textfourth`
19813 `\let\diamonddots\textdiamonddots`
19814 `\let\zerosuperior\textzerosuperior`
19815 `\let\isuperior\textisuperior`
19816 `\let\foursuperior\textfoursuperior`
19817 `\let\fivesuperior\textfivesuperior`
19818 `\let\sixsuperior\textsixsuperior`
19819 `\let\sevensuperior\textsevensuperior`
19820 `\let\eightsuperior\texteightsuperior`
19821 `\let\ninesuperior\textninesuperior`
19822 `\let\plussuperior\textplussuperior`
19823 `\let\minussuperior\textminussuperior`
19824 `\let\equalsuperior\textequalsuperior`
19825 `\let\parenleftsuperior\textparenleftsuperior`

19826 \let\parenrightsuperior\textparenrightsuperior
19827 \let\nsuperior\textnsuperior
19828 \let\zeroinferior\textzeroinferior
19829 \let\oneinferior\textoneinferior
19830 \let\twoinferior\texttwoinferior
19831 \let\threeinferior\textthreeinferior
19832 \let\fourinferior\textfourinferior
19833 \let\fiveinferior\textfiveinferior
19834 \let\sixinferior\textsixinferior
19835 \let\seveninferior\textseveninferior
19836 \let\eightinferior\texteightinferior
19837 \let\nineinferior\textnineinferior
19838 \let\plusinferior\textplusinferior
19839 \let\minusinferior\textminusinferior
19840 \let\equalsinferior\textequalsinferior
19841 \let\parenleftinferior\textparenleftinferior
19842 \let\parenrightinferior\textparenrightinferior
19843 \let\ainferior\textainferior
19844 \let\einferior\texteinferior
19845 \let\oinferior\textoinferior
19846 \let\xinferior\textxinferior
19847 \let\schwainferior\textschwainferior
19848 \let\hinferior\texthinferior
19849 \let\kinferior\textkinferior
19850 \let\linferior\textlinferior
19851 \let\minferior\textminferior
19852 \let\ninferior\textninferior
19853 \let\pinferior\textpinferior
19854 \let\sinferior\textsinferior
19855 \let\tinferior\texttinferior
19856 \let\Deleatur\textDeleatur
19857 \let\hslash\texthslash
19858 \let\Im\textIm
19859 \let\ell\textell
19860 \let\wp\textwp
19861 \let\Re\textRe
19862 \let\mho\textmho
19863 \let\riota\textriota
19864 \let\Finv\textFinv
19865 \let\aleph\textaleph
19866 \let\beth\textbeth
19867 \let\gimel\textgimel
19868 \let\daleth\textdaleth
19869 \let\xi\textxi
19870 \let\Game\textGame
19871 \let\leftarrow\textleftarrow
19872 \let\uparrow\textuparrow
19873 \let\rightarrow\textrightarrow
19874 \let\downarrow\textdownarrow
19875 \let\leftrightarrow\textleftrightarrow
19876 \let\updownarrow\textupdownarrow
19877 \let\nwarrow\textnwarrow
19878 \let\nearrow\textnearrow
19879 \let\searrow\textsearrow

19880 `\let\swarrow\textswarrow`
19881 `\let\nleftarrow\textnleftarrow`
19882 `\let\nrightarrow\textnrightarrow`
19883 `\let\twoheadleftarrow\texttwoheadleftarrow`
19884 `\let\ntwoheadleftarrow\textntwoheadleftarrow`
19885 `\let\twoheaduparrow\texttwoheaduparrow`
19886 `\let\twoheadrightarrow\texttwoheadrightarrow`
19887 `\let\ntwoheadrightarrow\textntwoheadrightarrow`
19888 `\let\twoheaddownarrow\texttwoheaddownarrow`
19889 `\let\leftarrowtail\textleftarrowtail`
19890 `\let\rightarrowtail\textrightarrowtail`
19891 `\let\mapsto\textmapsto`
19892 `\let\hookrightarrow\texthookrightarrow`
19893 `\let\hookleftarrow\texthookleftarrow`
19894 `\let\looparrowleft\textlooparrowleft`
19895 `\let\looparrowright\textlooparrowright`
19896 `\let\nleftrightarrow\textnleftrightarrow`
19897 `\let\lightning\textlightning`
19898 `\let\dsh\textdsh`
19899 `\let\curvearrowleft\textcurvearrowleft`
19900 `\let\curvearrowright\textcurvearrowright`
19901 `\let\leftharpoonup\textleftharpoonup`
19902 `\let\leftharpoondown\textleftharpoondown`
19903 `\let\upharpoonright\textupharpoonright`
19904 `\let\upharpoonleft\textupharpoonleft`
19905 `\let\rightarpoonup\textrightarpoonup`
19906 `\let\rightarpoondown\textrightarpoondown`
19907 `\let\downharpoonright\textdownharpoonright`
19908 `\let\downharpoonleft\textdownharpoonleft`
19909 `\let\rightleftarrows\textrightleftarrows`
19910 `\let\updownarrows\textupdownarrows`
19911 `\let\leftrightarrows\textleftrightarrows`
19912 `\let\leftleftarrows\textleftleftarrows`
19913 `\let\upuparrows\textupuparrows`
19914 `\let\rightrightarrow\textrightarrow`
19915 `\let\downrightarrow\textdownrightarrow`
19916 `\let\leftthreearrows\textleftthreearrows`
19917 `\let\rightthreearrows\textrightthreearrows`
19918 `\let\nLeftarrow\textnLeftarrow`
19919 `\let\nLeftrightarrow\textnLeftrightarrow`
19920 `\let\nRightarrow\textnRightarrow`
19921 `\let\Leftarrow\textLeftarrow`
19922 `\let\Uparrow\textUparrow`
19923 `\let\Rightarrow\textRightarrow`
19924 `\let\Downarrow\textDownarrow`
19925 `\let\Leftrightarrow\textLeftrightarrow`
19926 `\let\Updownarrow\textUpdownarrow`
19927 `\let\Nwarrow\textNwarrow`
19928 `\let\Nearrow\textNearrow`
19929 `\let\SEarrow\textSEarrow`
19930 `\let\Swarrow\textSwarrow`
19931 `\let\Lleftarrow\textLleftarrow`
19932 `\let\Rrightarrow\textRrightarrow`
19933 `\let\leftsquigarrow\textleftsquigarrow`

19934 `\let\rightsquigarrow\textrightsquigarrow`
19935 `\let\dashleftarrow\textdashleftarrow`
19936 `\let\dasheduparrow\textdasheduparrow`
19937 `\let\dashrightarrow\textdashrightarrow`
19938 `\let\dasheddownarrow\textdasheddownarrow`
19939 `\let\pointer\textpointer`
19940 `\let\downuparrows\textdownuparrows`
19941 `\let\leftarrowtriangle\textleftarrowtriangle`
19942 `\let\rightarrowtriangle\textrightarrowtriangle`
19943 `\let\leftrightarrowtriangle\textleftrightarrowtriangle`
19944 `\let\forall\textforall`
19945 `\let\complement\textcomplement`
19946 `\let\partial\textpartial`
19947 `\let\exists\textexists`
19948 `\let\nexists\textnexists`
19949 `\let\emptyset\textemptyset`
19950 `\let\triangle\texttriangle`
19951 `\let\nabla\textnabla`
19952 `\let\in\textin`
19953 `\let\notin\textnotin`
19954 `\let\smallin\textsmallin`
19955 `\let\ni\textni`
19956 `\let\notowner\textnotowner`
19957 `\let\smallowns\textsmallowns`
19958 `\let\prod\textprod`
19959 `\let\amalg\textamalg`
19960 `\let\sum\textsum`
19961 `\let\mp\textmp`
19962 `\let\dotplus\textdotplus`
19963 `\let\Divides\textDivides`
19964 `\let\DividesNot\textDividesNot`
19965 `\let\setminus\textsetminus`
19966 `\let\ast\textast`
19967 `\let\circ\textcirc`
19968 `\let\surd\textsurd`
19969 `\let\propto\textpropto`
19970 `\let\infty\textinfty`
19971 `\let\angle\textangle`
19972 `\let\measuredangle\textmeasuredangle`
19973 `\let\sphericalangle\textsphericalangle`
19974 `\let\mid\textmid`
19975 `\let\nmid\textnmid`
19976 `\let\parallel\textparallel`
19977 `\let\nparallel\textnparallel`
19978 `\let\wedge\textwedge`
19979 `\let\owedge\textowedge`
19980 `\let\vee\textvee`
19981 `\let\ovee\textovee`
19982 `\let\cap\textcap`
19983 `\let\cup\textcup`
19984 `\let\int\textint`
19985 `\let\iint\textiint`
19986 `\let\iiint\textiiint`
19987 `\let\oint\textoint`

19988 \let\oiint\textoiint
19989 \let\ointclockwise\textointclockwise
19990 \let\ointctrlockwise\textointctrlockwise
19991 \let\therefore\texttherefore
19992 \let\because\textbecause
19993 \let\vdotdot\textvdotdot
19994 \let\squaredots\textsquaredots
19995 \let\dotminus\textdotminus
19996 \let\eqcolon\texteqcolon
19997 \let\sim\textsim
19998 \let\backsim\textbacksim
19999 \let\nbacksim\textnbacksim
20000 \let\wr\textwr
20001 \let\nsim\textnsim
20002 \let\eqsim\texteqsim
20003 \let\neqsim\textneqsim
20004 \let\simeq\textsimeq
20005 \let\nsimeq\textnsimeq
20006 \let\cong\textcong
20007 \let\ncong\textncong
20008 \let\approx\textapprox
20009 \let\napprox\textnapprox
20010 \let\approxeq\textapproxeq
20011 \let\napproxeq\textnapproxeq
20012 \let\triplesim\texttriplesim
20013 \let\ntriplesim\textntriplesim
20014 \let\backcong\textbackcong
20015 \let\nbackcong\textnbackcong
20016 \let\asymp\textasymp
20017 \let\nasymp\textnasymp
20018 \let\Bumpeq\textBumpeq
20019 \let\nBumpeq\textnBumpeq
20020 \let\bumpeq\textbumpeq
20021 \let\nbumpeq\textnbumpeq
20022 \let\doteq\textdoteq
20023 \let\ndoteq\textndoteq
20024 \let\doteqdot\textdoteqdot
20025 \let\ndoteq\textndoteq
20026 \let\fallingdoteq\textfallingdoteq
20027 \let\nfallingdoteq\textnfallingdoteq
20028 \let\risingdoteq\textrisingdoteq
20029 \let\nrisingdoteq\textnrisingdoteq
20030 \let\colonequals\textcolonequals
20031 \let\equalscolon\textequalscolon
20032 \let\eqcirc\texteqcirc
20033 \let\neqcirc\textneqcirc
20034 \let\circeq\textcirceq
20035 \let\ncirceq\textncirceq
20036 \let\hateq\texthateq
20037 \let\nhateq\textnhateq
20038 \let\triangleq\texttriangleq
20039 \let\neq\textneq
20040 \let\ne\textne
20041 \let\equiv\textequiv

20042 \let\nequiv\textnequiv
 20043 \let\leq\textleq
 20044 \let\le\textle
 20045 \let\geq\textgeq
 20046 \let\ge\textge
 20047 \let\leqq\textleqq
 20048 \let\leqq\textleqq
 20049 \let\geqq\textgeqq
 20050 \let\ngqq\textngqq
 20051 \let\lneqq\textlneqq
 20052 \let\gneqq\textgneqq
 20053 \let\ll\textll
 20054 \let\nll\textnll
 20055 \let\gg\textgg
 20056 \let\ngg\textngg
 20057 \let\between\textbetween
 20058 \let\nless\textnless
 20059 \let\ngtr\textngtr
 20060 \let\lneq\textlneq
 20061 \let\ngeq\textngeq
 20062 \let\lesssim\textlessim
 20063 \let\gtrsim\textgtrsim
 20064 \let\nlessim\textnlessim
 20065 \let\ngtrsim\textngtrsim
 20066 \let\lessgtr\textlessgtr
 20067 \let\gtrless\textgtrless
 20068 \let\ngtrless\textngtrless
 20069 \let\nlessgtr\textnlessgtr
 20070 \let\prec\textprec
 20071 \let\succ\textsucc
 20072 \let\preccurlyeq\textpreccurlyeq
 20073 \let\succcurlyeq\textsucccurlyeq
 20074 \let\prec\textprec
 20075 \let\prec\textprec
 20076 \let\succsim\textsuccsim
 20077 \let\nsuccsim\textnsuccsim
 20078 \let\prec\textprec
 20079 \let\nsucc\textnsucc
 20080 \let\subset\textsubset
 20081 \let\supset\textsupset
 20082 \let\nsubset\textnsubset
 20083 \let\nsupset\textnsupset
 20084 \let\subseteq\textsubseteq
 20085 \let\supseteq\textsupseteq
 20086 \let\nsubseteq\textnsubseteq
 20087 \let\nsupseteq\textnsupseteq
 20088 \let\subsetneq\textsubsetneq
 20089 \let\supsetneq\textsupsetneq
 20090 \let\cupdot\textcupdot
 20091 \let\cupplus\textcupplus
 20092 \let\sqsubset\textsqsubset
 20093 \let\nsqsubset\textnsqsubset
 20094 \let\sqsupset\textsqsupset
 20095 \let\nsqsupset\textnsqsupset

20096 `\let\sqssubseteq\textsqsubseteq`
 20097 `\let\nsqssubseteq\textnsqssubseteq`
 20098 `\let\sqsupseteq\textsqsupseteq`
 20099 `\let\nsqsupseteq\textnsqsupseteq`
 20100 `\let\sqcap\textsqcap`
 20101 `\let\sqcup\textsqcup`
 20102 `\let\oplus\textoplus`
 20103 `\let\ominus\textominus`
 20104 `\let\otimes\textotimes`
 20105 `\let\oslash\textoslash`
 20106 `\let\odot\textodot`
 20107 `\let\circledcirc\textcircledcirc`
 20108 `\let\circledast\textcircledast`
 20109 `\let\circleddash\textcircleddash`
 20110 `\let\boxplus\textboxplus`
 20111 `\let\boxminus\textboxminus`
 20112 `\let\boxtimes\textboxtimes`
 20113 `\let\boxdot\textboxdot`
 20114 `\let\vdash\textvdash`
 20115 `\let\dashv\textdashv`
 20116 `\let\ndashv\textndashv`
 20117 `\let\top\texttop`
 20118 `\let\ndownvdash\textndownvdash`
 20119 `\let\bot\textbot`
 20120 `\let\nupvdash\textnupvdash`
 20121 `\let\vDash\textvDash`
 20122 `\let\VDash\textVDash`
 20123 `\let\Vvdash\textVvdash`
 20124 `\let\NVdash\textNVdash`
 20125 `\let\VDash\textVDash`
 20126 `\let\Nvdash\textNvdash`
 20127 `\let\NVDash\textNVDash`
 20128 `\let\NVdash\textNVdash`
 20129 `\let\NVDash\textNVDash`
 20130 `\let\lhd\textlhd`
 20131 `\let\rhd\textrhd`
 20132 `\let\unlhd\textunlhd`
 20133 `\let\unrhd\textunrhd`
 20134 `\let\multimapdotbothA\textmultimapdotbothA`
 20135 `\let\multimapdotbothB\textmultimapdotbothB`
 20136 `\let\multimap\textmultimap`
 20137 `\let\veebar\textveebar`
 20138 `\let\barwedge\textbarwedge`
 20139 `\let\star\textstar`
 20140 `\let\divideontimes\textdivideontimes`
 20141 `\let\bowtie\textbowtie`
 20142 `\let\ltimes\textltimes`
 20143 `\let\rtimes\textrtimes`
 20144 `\let\leftthreetimes\textleftthreetimes`
 20145 `\let\rightthreetimes\textrightthreetimes`
 20146 `\let\backsimeq\textbacksimeq`
 20147 `\let\Nbacksimeq\textNbacksimeq`
 20148 `\let\curlyvee\textcurlyvee`
 20149 `\let\curlywedge\textcurlywedge`

20150 \let\Subset\textSubset
 20151 \let\nSubset\textnSubset
 20152 \let\Supset\textSupset
 20153 \let\nSupset\textnSupset
 20154 \let\Cap\textCap
 20155 \let\Cup\textCup
 20156 \let\pitchfork\textpitchfork
 20157 \let\lessdot\textlessdot
 20158 \let\gtrdot\textgtrdot
 20159 \let\lll\textlll
 20160 \let\ggg\textggg
 20161 \let\lesseqgtr\textlesseqgtr
 20162 \let\gtreqless\textgtreqless
 20163 \let\curlyeqprec\textcurlyeqprec
 20164 \let\ncurlyeqprec\textncurlyeqprec
 20165 \let\curlyeqsucc\textcurlyeqsucc
 20166 \let\ncurlyeqsucc\textncurlyeqsucc
 20167 \let\preccurlyeq\textpreccurlyeq
 20168 \let\succcurlyeq\textsucccurlyeq
 20169 \let\nqsubseteq\textnqsubseteq
 20170 \let\nqsupseteq\textnqsupseteq
 20171 \let\sqsubsetneq\textsqsubsetneq
 20172 \let\sqsupsetneq\textsqsupsetneq
 20173 \let\lnsim\textlnsim
 20174 \let\gnsim\textgnsim
 20175 \let\precnsim\textprecnsim
 20176 \let\succnsim\textsuccnsim
 20177 \let\ntriangleleft\textntriangleleft
 20178 \let\ntriangleright\textntriangleright
 20179 \let\ntrianglelefteq\textntrianglelefteq
 20180 \let\ntrianglerighteq\textntrianglerighteq
 20181 \let\vdots\textvdots
 20182 \let\cdots\textcdots
 20183 \let\udots\textudots
 20184 \let\ddots\textddots
 20185 \let\barin\textbarin
 20186 \let\diameter\textdiameter
 20187 \let\backneg\textbackneg
 20188 \let\wasylozenge\textwasylozenge
 20189 \let\invbackneg\textinvbackneg
 20190 \let\clock\textclock
 20191 \let\ulcorner\textulcorner
 20192 \let\urcorner\texturcorner
 20193 \let\llcorner\textllcorner
 20194 \let\lrcorner\textlrcorner
 20195 \let\frown\textfrown
 20196 \let\smile\textsmile
 20197 \let\Keyboard\textKeyboard
 20198 \let\langle\textlangle
 20199 \let\rangle\textrangle
 20200 \let\APLinv\textAPLinv
 20201 \let\Tumbler\textTumbler
 20202 \let\notslash\textnotslash
 20203 \let\notbackslash\textnotbackslash

20204 \let\boxbackslash\textboxbackslash
20205 \let\APLleftarrowbox\textAPLleftarrowbox
20206 \let\APLrightarrowbox\textAPLrightarrowbox
20207 \let\APLuparrowbox\textAPLuparrowbox
20208 \let\APLdownarrowbox\textAPLdownarrowbox
20209 \let\APLinput\textAPLinput
20210 \let\Request\textRequest
20211 \let\Beam\textBeam
20212 \let\hexagon\texthexagon
20213 \let\APLbox\textAPLbox
20214 \let\ForwardToIndex\textForwardToIndex
20215 \let\RewindToIndex\textRewindToIndex
20216 \let\bbslash\textbbslash
20217 \let\CircledA\textCircledA
20218 \let\CleaningF\textCleaningF
20219 \let\CleaningFF\textCleaningFF
20220 \let\CleaningP\textCleaningP
20221 \let\CleaningPP\textCleaningPP
20222 \let\CuttingLine\textCuttingLine
20223 \let\UParrow\textUParrow
20224 \let\bigtriangleup\textbigtriangleup
20225 \let\Forward\textForward
20226 \let\triangleright\texttriangleright
20227 \let\RHD\textRHD
20228 \let\DOWNarrow\textDOWNarrow
20229 \let\bigtriangledown\textbigtriangledown
20230 \let\Rewind\textRewind
20231 \let\triangleleft\texttriangleleft
20232 \let\LHD\textLHD
20233 \let\diamond\textdiamond
20234 \let\lozenge\textlozenge
20235 \let\LEFTCIRCLE\textLEFTCIRCLE
20236 \let\RIGHTCIRCLE\textRIGHTCIRCLE
20237 \let\openbullet\textopenbullet
20238 \let\boxbar\textboxbar
20239 \let\bigcircle\textbigcircle
20240 \let\Cloud\textCloud
20241 \let\FiveStar\textFiveStar
20242 \let\FiveStarOpen\textFiveStarOpen
20243 \let\Phone\textPhone
20244 \let\boxempty\textboxempty
20245 \let\Checkedbox\textCheckedbox
20246 \let\Crossedbox\textCrossedbox
20247 \let\Coffeecup\textCoffeecup
20248 \let\HandCuffLeft\textHandCuffLeft
20249 \let\HandCuffRight\textHandCuffRight
20250 \let\HandLeft\textHandLeft
20251 \let\HandRight\textHandRight
20252 \let\Radioactivity\textRadioactivity
20253 \let\Biohazard\textBiohazard
20254 \let\Ankh\textAnkh
20255 \let\YinYang\textYinYang
20256 \let\frownie\textfrownie
20257 \let\smiley\textsmiley

20258 \let\blacksmiley\textblacksmiley
 20259 \let\sun\textsun
 20260 \let\leftmoon\textleftmoon
 20261 \let\rightmoon\textrightmoon
 20262 \let\mercury\textmercury
 20263 \let\earth\textearth
 20264 \let\male\textmale
 20265 \let\jupiter\textjupiter
 20266 \let\saturn\textsaturn
 20267 \let\uranus\texturanus
 20268 \let\neptune\textneptune
 20269 \let\pluto\textpluto
 20270 \let\aries\textaries
 20271 \let\taurus\texttaurus
 20272 \let\gemini\textgemini
 20273 \let\cancer\textcancer
 20274 \let\leo\textleo
 20275 \let\virgo\textvirgo
 20276 \let\libra\textlibra
 20277 \let\scorpio\textscorpio
 20278 \let\sagittarius\textsagittarius
 20279 \let\capricornus\textcapricornus
 20280 \let\aquarius\textaquarius
 20281 \let\pisces\textpisces
 20282 \let\quarternote\textquarternote
 20283 \let\twonotes\texttwonotes
 20284 \let\sixteenthnote\textsixteenthnote
 20285 \let\flat\textflat
 20286 \let\natural\textnatural
 20287 \let\sharp\textsharp
 20288 \let\recycle\textrecycle
 20289 \let\Wheelchair\textWheelchair
 20290 \let\Flag\textFlag
 20291 \let\MineSign\textMineSign
 20292 \let\ds military\textds military
 20293 \let\ds medical\textds medical
 20294 \let\ds juridical\textds juridical
 20295 \let\ds chemical\textds chemical
 20296 \let\ds biological\textds biological
 20297 \let\ds commercial\textds commercial
 20298 \let\manstar\textmanstar
 20299 \let\danger\textdanger
 20300 \let\FemaleFemale\textFemaleFemale
 20301 \let\MaleMale\textMaleMale
 20302 \let\FemaleMale\textFemaleMale
 20303 \let\Hermaphrodite\textHermaphrodite
 20304 \let\Neutral\textNeutral
 20305 \let\hexstar\texthexstar
 20306 \let\SunCloud\textSunCloud
 20307 \let\Rain\textRain
 20308 \let\noway\textnoway
 20309 \let\Mountain\textMountain
 20310 \let\Tent\textTent
 20311 \let\ScissorRight\textScissorRight

20312 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
20313 \let\ScissorHollowRight\textScissorHollowRight
20314 \let\PhoneHandset\textPhoneHandset
20315 \let\Tape\textTape
20316 \let\Plane\textPlane
20317 \let\Envelope\textEnvelope
20318 \let\Peace\textPeace
20319 \let\WritingHand\textWritingHand
20320 \let\PencilRightDown\textPencilRightDown
20321 \let\PencilRight\textPencilRight
20322 \let\PencilRightUp\textPencilRightUp
20323 \let\NibRight\textNibRight
20324 \let\NibSolidRight\textNibSolidRight
20325 \let\Checkmark\textCheckmark
20326 \let\CheckmarkBold\textCheckmarkBold
20327 \let\XSolid\textXSolid
20328 \let\XSolidBold\textXSolidBold
20329 \let\XSolidBrush\textXSolidBrush
20330 \let\PlusOutline\textPlusOutline
20331 \let\Plus\textPlus
20332 \let\PlusThinCenterOpen\textPlusThinCenterOpen
20333 \let\PlusCenterOpen\textPlusCenterOpen
20334 \let\Cross\textCross
20335 \let\CrossOpenShadow\textCrossOpenShadow
20336 \let\CrossOutline\textCrossOutline
20337 \let\CrossMaltese\textCrossMaltese
20338 \let\DavidStar\textDavidStar
20339 \let\FourAsterisk\textFourAsterisk
20340 \let\JackStar\textJackStar
20341 \let\JackStarBold\textJackStarBold
20342 \let\ClowerTips\textClowerTips
20343 \let\FourStar\textFourStar
20344 \let\FourStarOpen\textFourStarOpen
20345 \let\FiveStarOpenCircled\textFiveStarOpenCircled
20346 \let\FiveStarCenterOpen\textFiveStarCenterOpen
20347 \let\FiveStarOpenDotted\textFiveStarOpenDotted
20348 \let\FiveStarOutline\textFiveStarOutline
20349 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
20350 \let\FiveStarConvex\textFiveStarConvex
20351 \let\FiveStarShadow\textFiveStarShadow
20352 \let\AsteriskBold\textAsteriskBold
20353 \let\AsteriskCenterOpen\textAsteriskCenterOpen
20354 \let\EightStarTaper\textEightStarTaper
20355 \let\EightStarConvex\textEightStarConvex
20356 \let\SixStar\textSixStar
20357 \let\EightStar\textEightStar
20358 \let\EightStarBold\textEightStarBold
20359 \let\TwelveStar\textTwelveStar
20360 \let\SixteenStarLight\textSixteenStarLight
20361 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
20362 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
20363 \let\Asterisk\textAsterisk
20364 \let\SixFlowerAlternate\textSixFlowerAlternate
20365 \let\FiveFlowerPetal\textFiveFlowerPetal

20366 \let\FiveFlowerOpen\textFiveFlowerOpen
20367 \let\EightFlowerPetal\textEightFlowerPetal
20368 \let\SunshineOpenCircled\textSunshineOpenCircled
20369 \let\SixFlowerAltPetal\textSixFlowerAltPetal
20370 \let\SnowflakeChevron\textSnowflakeChevron
20371 \let\Snowflake\textSnowflake
20372 \let\SnowflakeChevronBold\textSnowflakeChevronBold
20373 \let\Sparkle\textSparkle
20374 \let\SparkleBold\textSparkleBold
20375 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
20376 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
20377 \let\EightAsterisk\textEightAsterisk
20378 \let\CircleShadow\textCircleShadow
20379 \let\SquareShadowBottomRight\textSquareShadowBottomRight
20380 \let\SquareTopRight\textSquareTopRight
20381 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
20382 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
20383 \let\DiamandSolid\textDiamandSolid
20384 \let\RectangleThin\textRectangleThin
20385 \let\Rectangle\textRectangle
20386 \let\RectangleBold\textRectangleBold
20387 \let\perp\textperp
20388 \let\notperp\textnotperp
20389 \let\veedot\textveedot
20390 \let\wedgedot\textwedgedot
20391 \let\leftspoon\textleftspoon
20392 \let\lbrackdbl\textlbrackdbl
20393 \let\rbrackdbl\textrbrackdbl
20394 \let\circlearrowleft\textcirclearrowleft
20395 \let\circlearrowright\textcirclearrowright
20396 \let\longleftarrow\textlongleftarrow
20397 \let\longrightarrow\textlongrightarrow
20398 \let\longleftrightarrow\textlongleftrightarrow
20399 \let\Longleftarrow\textLongleftarrow
20400 \let\Longrightarrow\textLongrightarrow
20401 \let\Longleftrightarrow\textLongleftrightarrow
20402 \let\longmapsto\textlongmapsto
20403 \let\Longmapsfrom\textLongmapsfrom
20404 \let\Longmapsto\textLongmapsto
20405 \let\nwsearrow\textnwsearrow
20406 \let\neswarrow\textneswarrow
20407 \let\hookrightarrow\texthookrightarrow
20408 \let\rhookrightarrow\textrhookrightarrow
20409 \let\hooksearrow\texthooksearrow
20410 \let\rhooksearrow\textrhooksearrow
20411 \let\leadsto\textleadsto
20412 \let\rcurvearrowne\textrcurvearrowne
20413 \let\lcurvearrowse\textlcurvearrowse
20414 \let\lcurvearrowsw\textlcurvearrowsw
20415 \let\rcurvearrowse\textrcurvearrowse
20416 \let\lcurvearrowdown\textlcurvearrowdown
20417 \let\rcurvearrowdown\textrcurvearrowdown
20418 \let\rcurvearrowleft\textrcurvearrowleft
20419 \let\rcurvearrowright\textrcurvearrowright

20420 `\let\leftrightharpoon\textleftrightharpoon`
20421 `\let\rightleftharpoon\textrightleftharpoon`
20422 `\let\updownharpoonrightleft\textupdownharpoonrightleft`
20423 `\let\updownharpoonleftright\textupdownharpoonleftright`
20424 `\let\leftleftharpoons\textleftleftharpoons`
20425 `\let\upupharpoons\textupupharpoons`
20426 `\let\righttrightharpoons\textrighttrightharpoons`
20427 `\let\downdownharpoons\textdowndownharpoons`
20428 `\let\leftbarharpoon\textleftbarharpoon`
20429 `\let\barleftharpoon\textbarleftharpoon`
20430 `\let\rightbarharpoon\textrightbarharpoon`
20431 `\let\barrightharpoon\textbarrightharpoon`
20432 `\let\updownharpoons\textupdownharpoons`
20433 `\let\downupharpoons\textdownupharpoons`
20434 `\let\moo\textmoo`
20435 `\let\llparenthesis\textllparenthesis`
20436 `\let\rrparenthesis\textrrparenthesis`
20437 `\let\invdiameter\textinvdiameter`
20438 `\let\obar\textobar`
20439 `\let\obslash\textobslash`
20440 `\let\obot\textobot`
20441 `\let\NoChemicalCleaning\textNoChemicalCleaning`
20442 `\let\olessthan\textolessthan`
20443 `\let\ogreaterthan\textogreaterthan`
20444 `\let\boxslash\textboxslash`
20445 `\let\boxbslash\textboxbslash`
20446 `\let\boxast\textboxast`
20447 `\let\boxcircle\textboxcircle`
20448 `\let\boxbox\textboxbox`
20449 `\let\Valve\textValve`
20450 `\let\multimapboth\textmultimapboth`
20451 `\let\shuffle\textshuffle`
20452 `\let\uplus\textuplus`
20453 `\let\bigdoublewedge\textbigdoublewedge`
20454 `\let\bigdoublevee\textbigdoublevee`
20455 `\let\Join\textJoin`
20456 `\let\fatsemi\textfatsemi`
20457 `\let\cirplus\textcirplus`
20458 `\let\minusdot\textminusdot`
20459 `\let\dottimes\textdottimes`
20460 `\let\dtimes\textdtimes`
20461 `\let\odiv\textodiv`
20462 `\let\invneg\textinvneg`
20463 `\let\sqdoublecap\textsqdoublecap`
20464 `\let\capdot\textcapdot`
20465 `\let\sqdoublecup\textsqdoublecup`
20466 `\let\doublewedge\textdoublewedge`
20467 `\let\doublevee\textdoublevee`
20468 `\let\doublebarwedge\textdoublebarwedge`
20469 `\let\veedoublebar\textveedoublebar`
20470 `\let\eqdot\texteqdot`
20471 `\let\neqdot\textneqdot`
20472 `\let\coloncolonequals\textcoloncolonequals`
20473 `\let\leqslant\textleqslant`

20474 `\let\nleqslant\textnleqslant`
20475 `\let\geqslant\textgeqslant`
20476 `\let\ngeqslant\textngeqslant`
20477 `\let\lessapprox\textlessapprox`
20478 `\let\nlessapprox\textnlessapprox`
20479 `\let\gtrapprox\textgtrapprox`
20480 `\let\ngtrapprox\textngtrapprox`
20481 `\let\lneq\textlneq`
20482 `\let\gneq\textgneq`
20483 `\let\lnapprox\textlnapprox`
20484 `\let\gnapprox\textgnapprox`
20485 `\let\lesseqgtr\textlesseqgtr`
20486 `\let\gtreqless\textgtreqless`
20487 `\let\eqslantless\texteqslantless`
20488 `\let\eqslantgtr\texteqslantgtr`
20489 `\let\leftslice\textleftslice`
20490 `\let\rightslice\textrightslice`
20491 `\let\preceq\textpreceq`
20492 `\let\npreceq\textnpreceq`
20493 `\let\succeq\textsucceq`
20494 `\let\nsucceq\textnsucceq`
20495 `\let\precneq\textprecneq`
20496 `\let\succneq\textsuccneq`
20497 `\let\preceqq\textpreceqq`
20498 `\let\npreceqq\textnpreceqq`
20499 `\let\succeqq\textsucceqq`
20500 `\let\nsucceqq\textnsucceqq`
20501 `\let\precneqq\textprecneqq`
20502 `\let\succneqq\textsuccneqq`
20503 `\let\precapprox\textprecapprox`
20504 `\let\nprecapprox\textnprecapprox`
20505 `\let\succapprox\textsuccapprox`
20506 `\let\nsuccapprox\textnsuccapprox`
20507 `\let\precnapprox\textprecnapprox`
20508 `\let\succnapprox\textsuccnapprox`
20509 `\let\subseteqq\textsubseteqq`
20510 `\let\nsubseteqq\textnsubseteqq`
20511 `\let\supseteqq\textsupseteqq`
20512 `\let\nsupseteqq\textnsupseteqq`
20513 `\let\dashV\textdashV`
20514 `\let\ndashV\textndashV`
20515 `\let\Dashv\textDashv`
20516 `\let\nDashv\textnDashv`
20517 `\let\DashV\textDashV`
20518 `\let\nDashV\textnDashV`
20519 `\let\downmodels\textdownmodels`
20520 `\let\ndownmodels\textndownmodels`
20521 `\let\upmodels\textupmodels`
20522 `\let\nupmodels\textnupmodels`
20523 `\let\upspoon\textupspoon`
20524 `\let\interleave\textinterleave`
20525 `\let\slash\textslash`
20526 `\let\pentagon\textpentagon`
20527 `\let\varhexagon\textvarhexagon`

20528 `\let\jinferior\textjinferior`
20529 `\let\slashdiv\textslashdiv`
20530 `\let\fivedots\textfivedots`
20531 `\let\oo\textoo`
20532 `\let\GaPa\textGaPa`
20533 `\let\HaPa\textHaPa`
20534 `\let\ViPa\textViPa`
20535 `\let\AcPa\textAcPa`
20536 `\let\SePa\textSePa`
20537 `\let\ZwPa\textZwPa`
20538 `\let\fullnote\textfullnote`
20539 `\let\halfnote\texthalfnote`
20540 `\let\Vier\textVier`
20541 `\let\Acht\textAcht`
20542 `\let\Sech\textSech`
20543 `\let\Zwdr\textZwdr`
20544 `\let\Mundus\textMundus`
20545 `\let\Moon\textMoon`
20546 `\let\ManFace\textManFace`
20547 `\let\WomanFace\textWomanFace`
20548 `\let\Fax\textFax`
20549 `\let\Fire\textFire`
20550 `\let\Bicycle\textBicycle`
20551 `\let\Gentsroom\textGentsroom`
20552 `\let\Ladiesroom\textLadiesroom`
20553 `\let\ccnc\textccnc`
20554 `\let\ccsa\textccsa`
20555 `\let\Info\textInfo`
20556 `\let\CESign\textCESign`
20557 `\let\neg\textneg`
20558 `\let\times\texttimes`
20559 `\let\div\textdiv`
20560 `\let\pm\textpm`
20561 `\let\cdot\textcdot`
20562 `}% \psdmapshortnames`
20563 `\newcommand*{\psdaliasnames}{%`
20564 `\let\epsdice\HyPsd@DieFace`
20565 `\let\fcdice\HyPsd@DieFace`
20566 `\let\MoonPha\HyPsd@MoonPha`
20567 `\let\mathdollar\textdollar`
20568 `\let\EyesDollar\textdollar`
20569 `\let\binampersand\textampersand`
20570 `\let\with\textampersand`
20571 `\let\mathunderscore\textunderscore`
20572 `\let\textvertline\textbar`
20573 `\let\mathsterling\textsterling`
20574 `\let\pounds\textsterling`
20575 `\let\brokenvert\textbrokenbar`
20576 `\let\mathsection\textsection`
20577 `\let\S\textsection`
20578 `\let\mathparagraph\textparagraph`
20579 `\let\MultiplicationDot\textperiodcentered`
20580 `\let\Squaredot\textperiodcentered`
20581 `\let\vartimes\textmultiply`

20582 \let\MVMultiplication\textmultiply
20583 \let\eth\dh
20584 \let\crossd\textcrd
20585 \let\textbard\textcrd
20586 \let\bard\textcrd
20587 \let\textcrh\texthbar
20588 \let\crossh\texthbar
20589 \let\planck\texthbar
20590 \let\eng\ng
20591 \let\engma\ng
20592 \let\crossb\textcrb
20593 \let\textbarb\textcrb
20594 \let\barb\textcrb
20595 \let\Florin\textflorin
20596 \let\hv\texthvlig
20597 \let\hausak\texthtk
20598 \let\crossnilambda\textcrlambda
20599 \let\barlambda\textcrlambda
20600 \let\lambdabar\textcrlambda
20601 \let\lambdaslash\textcrlambda
20602 \let\textnrleg\textPUnrleg
20603 \let\textpipevar\textpipe
20604 \let\textdoublepipevar\textdoublepipe
20605 \let\textdoublebarpipevar\textdoublebarpipe
20606 \let\textcrg\textgslash
20607 \let\textdblig\textPUdblig
20608 \let\textqplig\textPUqplig
20609 \let\textcentoldstyle\textslashc
20610 \let\textbarc\textslashc
20611 \let\inva\textturna
20612 \let\vara\textscripta
20613 \let\invscripta\textturnscripta
20614 \let\rotvara\textturnscripta
20615 \let\hookb\texthtb
20616 \let\hausab\texthtb
20617 \let\varopeno\textopeno
20618 \let\curlyc\textctc
20619 \let\taild\textrtaild
20620 \let\hookd\texthtd
20621 \let\hausad\texthtd
20622 \let\er\textrhookschwa
20623 \let\epsi\textniepsilon
20624 \let\hookrepsilon\textrhookrepsilon
20625 \let\closedrepsilon\textcloserepsilon
20626 \let\barj\textbardotlessj
20627 \let\hookg\texthtg
20628 \let\varg\textscriptg
20629 \let\vod\textipagamma
20630 \let\invh\textturnh
20631 \let\udesc\textturnh
20632 \let\hookh\texthth
20633 \let\voicedh\texthth
20634 \let\hookheng\texththeng
20635 \let\ibar\textbari

20636 \let\vari\textniota
 20637 \let\tildel\textltilde
 20638 \let\latfric\textbeltl
 20639 \let\tail\textrrtail
 20640 \let\lz\textlyoghlig
 20641 \let\invm\textturnm
 20642 \let\rotm\textturnm
 20643 \let\legm\textturnmleg
 20644 \let\labdentainas\textltailm
 20645 \let\emgma\textltailm
 20646 \let\nj\textltailn
 20647 \let\enya\textltailn
 20648 \let\tain\textrrtailn
 20649 \let\closedniomega\textcloseomega
 20650 \let\varomega\textcloseomega
 20651 \let\invr\textturnr
 20652 \let\rotr\textturnr
 20653 \let\invlegr\textturnlonglegr
 20654 \let\tailinvr\textturnrrtail
 20655 \let\legr\textlonglegr
 20656 \let\tailr\textrrtailr
 20657 \let\flapr\textfishhookr
 20658 \let\flap\textfishhookr
 20659 \let\tails\textrrtails
 20660 \let\curlyesh\textctesh
 20661 \let\clickt\textturnt
 20662 \let\tailt\textrrtailt
 20663 \let\ubar\textbaru
 20664 \let\rotOmega\textniupsilon
 20665 \let\invv\textturnv
 20666 \let\pwedge\textturnv
 20667 \let\invw\textturnw
 20668 \let\rotw\textturnw
 20669 \let\invy\textturny
 20670 \let\roty\textturny
 20671 \let\tailz\textrrtailz
 20672 \let\curlyz\textctz
 20673 \let\curlyyogh\textctyogh
 20674 \let\ejective\textglotstop
 20675 \let\glottal\textglotstop
 20676 \let\reject\textrevglotstop
 20677 \let\clickc\textstretchc
 20678 \let\textstretchcvar\textstretchc
 20679 \let\clickb\textbullseye
 20680 \let\textObullseye\textbullseye
 20681 \let\textctjvar\textctj
 20682 \let\textturnsck\textturnk
 20683 \let\dz\textdzlig
 20684 \let\tesh\textteshlig
 20685 \let\digamma\textdigammagreek
 20686 \let\hardsign\cyrhrdsn
 20687 \let\softsign\cyrsoftsn
 20688 \let\hebsin\hebshin
 20689 \let\textsck\textPUscck

20690 \let\textscm\textPUscm
20691 \let\textscp\textPUscp
20692 \let\textrevscr\textPUrevscr
20693 \let\textrhooka\textPURhooka
20694 \let\textrhooke\textPURhooke
20695 \let\textrhookepsilon\textPURhookepsilon
20696 \let\texthookopeno\textPURhookopeno
20697 \let\textdoublevertline\textbardbl
20698 \let\dag\textdagger
20699 \let\ddagger\textdaggerdbl
20700 \let\ddag\textdaggerdbl
20701 \let\mathellipsis\textellipsis
20702 \let\EurDig\texteuro
20703 \let\EURdig\texteuro
20704 \let\EurHv\texteuro
20705 \let\EURhv\texteuro
20706 \let\EurCr\texteuro
20707 \let\EURcr\texteuro
20708 \let\EurTm\texteuro
20709 \let\EURtm\texteuro
20710 \let\Eur\texteuro
20711 \let\Denarius\textDeleatur
20712 \let\agemO\textmho
20713 \let\EstimatedSign\textestimated
20714 \let\Ecommerce\textestimated
20715 \let\bindnasrepma\textinvamp
20716 \let\parr\textinvamp
20717 \let\MVRightArrow\textrightarrow
20718 \let\MVRightarrow\textrightarrow
20719 \let\MVArrowDown\textdownarrow
20720 \let\Force\textdownarrow
20721 \let\textglobrise\textnearrow
20722 \let\textglobfall\textsearrow
20723 \let\Lightning\textlightning
20724 \let\Conclusion\textrightarrow
20725 \let\dashedleftarrow\textdashleftarrow
20726 \let\dashedrightarrow\textdashrightarrow
20727 \let\varnothing\textemptyset
20728 \let\owns\textni
20729 \let\notni\textnotowner
20730 \let\varprop\textpropto
20731 \let\varangle\textsphericalangle
20732 \let\Anglesign\textsphericalangle
20733 \let\AngleSign\textsphericalangle
20734 \let\notdivides\textnmid
20735 \let\varowedge\textowedge
20736 \let\varovee\textovee
20737 \let\varint\textint
20738 \let\varoint\textoint
20739 \let\downtherefore\textbecause
20740 \let\textdotdiv\textdotminus
20741 \let\AC\textsim
20742 \let\wreath\textwr
20743 \let\nthickapprox\textnapprox

20744 \let\VHF\texttriplesim
20745 \let\notasymp\textnasymp
20746 \let\Doteq\textdoteqdot
20747 \let\corresponds\texthateq
20748 \let\Corresponds\texthateq
20749 \let\nequal\textneq
20750 \let\Congruent\textequiv
20751 \let\NotCongruent\textnequiv
20752 \let\notequiv\textnequiv
20753 \let\LessOrEqual\textleq
20754 \let\LargerOrEqual\textgeq
20755 \let\apprle\textlessim
20756 \let\apprge\textgtrsim
20757 \let\varoplus\textoplus
20758 \let\varominus\textominus
20759 \let\varotimes\textotimes
20760 \let\varoslash\textoslash
20761 \let\varodot\textodot
20762 \let\ocirc\textcircledcirc
20763 \let\varocircle\textcircledcirc
20764 \let\varoast\textcircledast
20765 \let\oasterisk\textcircledast
20766 \let\rightvdash\textvdash
20767 \let\leftvdash\textdashv
20768 \let\leftvdash\textndashv
20769 \let\downvdash\texttop
20770 \let\upvdash\textbot
20771 \let\nperp\textnupvdash
20772 \let\models\textvDash
20773 \let\rightmodels\textvDash
20774 \let\rightVdash\textVdash
20775 \let\rightModels\textVDash
20776 \let\rightvdash\textnvdash
20777 \let\rightmodels\textnvDash
20778 \let\rightmodels\textnvDash
20779 \let\rightVdash\textnVdash
20780 \let\rightModels\textnVDash
20781 \let\lessclosed\textlhd
20782 \let\gtrclosed\textrhd
20783 \let\leqclosed\textunlhd
20784 \let\trianglelefteq\textunlhd
20785 \let\geqclosed\textunrhd
20786 \let\trianglerighteq\textunrhd
20787 \let\Bowtie\textbowtie
20788 \let\varcurlyvee\textcurlyvee
20789 \let\varcurlywedge\textcurlywedge
20790 \let\doublecap\textCap
20791 \let\doublecup\textCup
20792 \let\varsqsubsetneq\textsqssubsetneq
20793 \let\varsqsupsetneq\textsqsupsetneq
20794 \let\nlessclosed\textntriangleleft
20795 \let\ngtrclosed\textntriangleright
20796 \let\Clocklogo\textclock
20797 \let\ClockLogo\textclock

20798 \let\baro\textstmaryrdbaro
20799 \let\varparallelinv\textbbslash
20800 \let\CleaningA\textCircledA
20801 \let\Kutline\textCuttingLine
20802 \let\CutLine\textCuttingLine
20803 \let\Cutline\textCuttingLine
20804 \let\MoveUp\textUParrow
20805 \let\APLup\textbigtriangleup
20806 \let\Bleech\textbigtriangleup
20807 \let\MoveDown\textDOWNarrow
20808 \let\APLdown\textbigtriangledown
20809 \let\Diamond\textdiamond
20810 \let\varbigcirc\textbigcircle
20811 \let\Telefon\textPhone
20812 \let\Box\textboxempty
20813 \let\CheckedBox\textCheckedbox
20814 \let\XBox\textCrossedbox
20815 \let\CrossedBox\textCrossedbox
20816 \let\rightpointleft\textHandLeft
20817 \let\leftpointright\textHandRight
20818 \let\PointingHand\textHandRight
20819 \let\Pointinghand\textHandRight
20820 \let\Radiation\textRadioactivity
20821 \let\Yinyang\textYinYang
20822 \let\YingYang\textYinYang
20823 \let\Yingyang\textYinYang
20824 \let\Frowny\textfrownie
20825 \let\Smiley\textsmiley
20826 \let\Sun\textsun
20827 \let\Mercury\textmercury
20828 \let\textfemale\textPUfemale
20829 \let\female\textPUfemale
20830 \let\venus\textPUfemale
20831 \let\Venus\textPUfemale
20832 \let\Female\textPUfemale
20833 \let\Earth\textearth
20834 \let\mars\textmale
20835 \let\Mars\textmale
20836 \let\Male\textmale
20837 \let\Jupiter\textjupiter
20838 \let\Saturn\textsaturn
20839 \let\Uranus\texturanus
20840 \let\Neptune\textneptune
20841 \let\Pluto\textpluto
20842 \let\Aries\textaries
20843 \let\Taurus\texttaurus
20844 \let\Gemini\textgemini
20845 \let\Cancer\textcancer
20846 \let\Leo\textleo
20847 \let\Virgo\textvirgo
20848 \let\Libra\textlibra
20849 \let\Scorpio\textscorpio
20850 \let\Sagittarius\textsagittarius
20851 \let\Capricorn\textcapricornus

20852 \let\Aquarius\textaquarius
 20853 \let\Pisces\textpisces
 20854 \let\spadesuit\textspadesuitblack
 20855 \let\Heart\textheartsuitwhite
 20856 \let\heartsuit\textheartsuitwhite
 20857 \let\diamondsuit\textdiamondsuitwhite
 20858 \let\clubsuit\textclubsuitblack
 20859 \let\eighthnote\textmusicalnote
 20860 \let\Recycling\textrecycle
 20861 \let\VarFlag\textFlag
 20862 \let\textxswup\textdsmilitary
 20863 \let\textunconfemale\textPUunconfemale
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