

Hypertext marks in \LaTeX

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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 EuroTeX 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 \LaTeX ”

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3 File hycheck.tex

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

```
1 \langle*check\rangle
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             \cname ver@\HyC@package.sty\endcsname
39           }}
```

```

40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a \LaTeX 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 \LaTeX 's definitions is parsed.

```

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

```

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

```

74 \def\HyC@check#1{%
75   \def\HyC@cmd{#1}%
76   \let\HyC@org@cmd#1%
77   \let#1\relax
78   \let\HyC@param\@empty
79   \HyC@Toks{}%
80   \let\HyC@org@optcmd\HyC@noValue
81   \let\HyC@org@robustcmd\HyC@noValue
82   \let\HyC@org@robustoptcmd\HyC@noValue
83   \HyC@next
84 }

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```


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

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

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

```
90 \newtoks\HyC@Toks
```

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

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

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

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

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

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

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

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

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

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

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

`\Hy@SetCatcodes`

```
181 \def\Hy@SetCatcodes{%
182   \makeother`%
183   \makeother=%
184   \catcode`\$=3 %
185   \catcode`\&=4 %
186   \catcode`\^=7 %
187   \catcode`\_ =8 %
188   \makeother| %
189   \makeother\: %
190   \makeother\(%
191   \makeother\) %
192   \makeother\[ %
193   \makeother\] %
194   \makeother\/ %
195   \makeother\! %
196   \makeother\< %
197   \makeother\> %
198   \makeother\. %
199   \makeother\; %
200   \makeother\+ %
201   \makeother\- %
202   \makeother\" %
203   \makeother\' %
204 }
```

`\Hy@RestoreCatcodes`

```
205 \begingroup
206 \def\x#1{\catcode`\noexpand#1=\the\catcode`#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%

```

```

210 \x\&%
211 \x\^%
212 \x\_%
213 \x\|%
214 \x\:%
215 \x\(%
216 \x\) %
217 \x\[ %
218 \x\] %
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

231 \Hy@SetCatcodes
232 \RequirePackage{ltxcmds}[2010/11/12]
233 \RequirePackage{iftex}[2019/10/24]
234 \RequirePackage{pdftexcmds}[2009/04/10]
235 \@ifpackagelater{pdftexcmds}{2010/11/04}{}{}%
236 \ltx@ifundefined{pdfdraftmode}{}%
237 \let\pdf@ifdraftmode\ltx@secondoftwo
238 }{%
239 \ifpdf
240 \def\pdf@ifdraftmode{%
241 \ifnum\pdfdraftmode=\ltx@one
242 \expandafter\ltx@firstoftwo
243 \else
244 \expandafter\ltx@secondoftwo
245 \fi
246 }%
247 \else
248 \let\pdf@ifdraftmode\ltx@secondoftwo
249 \fi
250 }%
251 }

252 \RequirePackage{infwarerr}[2010/04/08]
253 \RequirePackage{keyval}[1997/11/10]
254 \RequirePackage{kvsetkeys}[2007/09/29]
255 \RequirePackage{kvdefinekeys}[2011/04/07]
256 \RequirePackage{pdfescape}[2007/11/11]
257 \RequirePackage{hycolor}
258 \RequirePackage{letltxmacro}[2008/06/13]
259 \RequirePackage{auxhook}[2009/12/14]
260 \def\Hy@Error{\@PackageError{hyperref}}
261 \def\Hy@Warning{\@PackageWarning{hyperref}}
262 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
263 \def\Hy@Info{\@PackageInfo{hyperref}}
264 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
265 \def\Hy@Message#1{%

```

```

266 \GenericWarning{%
267   (hyperref)\@spaces\@spaces\@spaces\@spaces
268 }{%
269   Package hyperref Message: #1\ltx@gobble
270 }%
271 }

```

4.2 Version check

\Hy@VersionChecked

```

272 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

273 \def\Hy@VersionCheck#1{%
274   \begingroup
275   \ltx@ifundefined{ver@hyperref.sty}{%
276     \Hy@Error{%
277       This should not happen!\MessageBreak
278       Missing hyperref version%
279     }\@ehd
280   }{%
281     \ltx@ifundefined{ver@#1}{%
282       \Hy@Error{%
283         This should not happen!\MessageBreak
284         Missing version of `#1'%
285       }\@ehd
286     }{%
287       \def\x##1##2##3{%
288         \expandafter\expandafter\expandafter\Hy@@VersionCheck
289         \expandafter\expandafter\expandafter##2%
290         \csname ver@##3\endcsname##1##1\@nil
291       }%
292       \x{ }\y{hyperref.sty}%
293       \x{ }\z{#1}%
294       \ifx\y\z
295       \else
296         \edef\a{#1}%
297         \edef\b{\HyOpt@CustomDriver.def}%
298         \ifx\a\b
299           \Hy@WarningNoLine{%
300             Version mismatch (custom driver)!\MessageBreak
301             * \y: hyperref.sty\MessageBreak
302             * \z: \a
303           }%
304         \else
305           \Hy@Error{%
306             Version mismatch!\MessageBreak
307             * \y: hyperref.sty\MessageBreak
308             * \z: \a
309           }\@ehd
310         \fi
311       \fi
312     }%
313   }%
314 \endgroup
315 \chardef\Hy@VersionChecked=1 %
316 }

```

\Hy@@VersionCheck

```
317 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%  
318 \def#1{#2 #3}%  
319 }
```

4.3 Checks with regular expressions

```
320 \ltx@ifundefined{pdfmatch}{%  
321 \def\Hy@Match#1#2#3#4#5{%  
322 }{%  
323 \def\Hy@Match#1#2#3{%  
324 \begingroup  
325 \edef\~{\ltx@backslashchar\string~}%  
326 \edef\.{\ltx@backslashchar.}%  
327 \edef\[{\ltx@backslashchar[]}%  
328 \edef\${\ltx@backslashchar$}%  
329 \edef\({\ltx@backslashchar(}%  
330 \edef\){\ltx@backslashchar)}%  
331 \edef\|{\ltx@backslashchar|}%  
332 \edef*\{\ltx@backslashchar*}%  
333 \edef\+{\ltx@backslashchar+}%  
334 \edef\?{\ltx@backslashchar?}%  
335 \edef\{{\ltx@backslashchar\ltx@leftbracechar}%  
336 \edef\}{\ltx@rightbracechar}%  
337 \edef\\{\ltx@backslashchar\ltx@backslashchar}%  
338 \let\ \ltx@space  
339 \ifcase\pdfmatch#2{#3}{#1} %  
340 \endgroup  
341 \expandafter\ltx@secondoftwo  
342 \or  
343 \endgroup  
344 \expandafter\ltx@firstoftwo  
345 \else  
346 \Hy@Warning{%  
347 Internal error: Wrong pattern!\MessageBreak  
348 --> #3 <--\MessageBreak  
349 Pattern check ignored%  
350 }%  
351 \endgroup  
352 \expandafter\ltx@firstoftwo  
353 \fi  
354 }%  
355 \ltx@ifpackagelater{ltxcmds}{2010/09/11}{%  
356 \begingroup  
357 \lccode`0=`{\relax  
358 \lowercase{\endgroup  
359 \def\ltx@leftbracechar{0}%  
360 }%  
361 \begingroup  
362 \lccode`0=`}\relax  
363 \lowercase{\endgroup  
364 \def\ltx@rightbracechar{0}%  
365 }%  
366 }%  
367 }
```

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`.

```
368 \@ifundefined{AfterBeginDocument}{%
369   \def\AfterBeginDocument{\AtBeginDocument}%
370 }{}%
```

`\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.

```
371 \def\Hy@AtBeginDocument{%
372   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
373 }
```

`\Hy@AtEndOfPackage`

```
374 \def\Hy@AtEndOfPackage{%
375   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
376 }
```

`\Hy@AtBeginDocumentHook`

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

`\Hy@AtEndOfPackageHook`

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

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

```
379 \AtEndOfPackage{%
380   \Hy@AtEndOfPackageHook
381   \let\Hy@AtEndOfPackageHook\@undefined
382   \AfterBeginDocument{%
383     \Hy@AtBeginDocumentHook}%
384   \let\Hy@AtBeginDocumentHook\@undefined
385   }%
386 }
```

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

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

4.5 Switches

```
388 \newif\ifHy@stoppeearly
389 \newif\ifHy@typexml
390 \newif\ifHy@activeanchor
391 \newif\ifHy@backref
392 \newif\ifHy@bookmarks
393 \newif\ifHy@bookmarksnumbered
394 \newif\ifHy@bookmarksopen
395 \newif\ifHy@breaklinks
```

```

396 \newif\ifHy@pdfcenterwindow
397 \newif\ifHy@CJKbookmarks
398 \newif\ifHy@colorlinks
399 \newif\ifHy@destlabel
400 \newif\ifHy@draft
401 \let\Hy@finaltrue\Hy@draftfalse
402 \let\Hy@finalfalse\Hy@drafttrue
403 \newif\ifHy@pdfescapeform
404 \newif\ifHy@hyperfigures
405 \newif\ifHy@pdffitwindow
406 \newif\ifHy@frenchlinks
407 \newif\ifHy@hyperfootnotes
408 \newif\ifHy@hyperindex
409 \newif\ifHy@hypertextnames
410 \newif\ifHy@implicit
411 \newif\ifHy@linktocpage
412 \newif\ifHy@localanchorname
413 \newif\ifHy@pdfmenubar
414 \newif\ifHy@naturalnames
415 \newif\ifHy@nesting
416 \newif\ifHy@pdfnewwindowset
417 \newif\ifHy@pdfnewwindow
418 \newif\ifHy@ocgcolorlinks
419 \newif\ifHy@pageanchor
420 \newif\ifHy@pdfpagelabels
421 \newif\ifHy@pdfpagehidden
422 \newif\ifHy@pdfstring
423 \newif\ifHy@plainpages
424 \newif\ifHy@psize
425 \newif\ifHy@raiselinks
426 \newif\ifHy@seminarslides
427 \newif\ifHy@setpagesize
428 \newif\ifHy@texht
429 \newif\ifHy@psdextra
430 \newif\ifHy@pdftoolbar
431 \newif\ifHy@unicode
432 \newif\ifHy@pdfusetitle
433 \newif\ifHy@verbose
434 \let\Hy@debugtrue\Hy@verbosetrue
435 \let\Hy@debugfalse\Hy@verbosefalse
436 \newif\ifHy@pdfwindowui
437 \newif\ifHy@pdfdisplaydoctitle
438 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

439 \Hy@backreffalse
440 \Hy@bookmarksnumberedfalse
441 \Hy@bookmarksopenfalse
442 \Hy@bookmarksstrue
443 \Hy@breaklinksfalse
444 \Hy@pdfcenterwindowfalse
445 \Hy@CJKbookmarksfalse
446 \Hy@destlabelfalse
447 \Hy@pdfescapeformfalse
448 \Hy@hyperfiguresfalse
449 \Hy@pdffitwindowfalse
450 \Hy@hyperfootnotetrue
451 \Hy@hyperindextrue

```



```

452 \Hy@hypertextnamestrue
453 \Hy@implicitttrue
454 \Hy@linktocpagefalse
455 \Hy@localanchornamefalse
456 \Hy@pdfmenubartrue
457 \Hy@naturalnamesfalse
458 \Hy@nestingfalse
459 \Hy@pdfnewwindowsetfalse
460 \Hy@pdfnewwindowfalse
461 \Hy@pageanchortrue
462 \Hy@pdfpagelabelstrue
463 \Hy@pdfpagehiddenfalse
464 \Hy@pdfstringfalse
465 \Hy@plainpagesfalse
466 \Hy@raiselinksfalse
467 \Hy@setpagesizetrue
468 \Hy@texhtfalse
469 \Hy@psdextrafalse
470 \Hy@pdftoolbartrue
471 \Hy@typexmlfalse
472 \Hy@unicodetrue
473 \Hy@pdfusetitlefalse
474 \Hy@verbosefalse
475 \Hy@pdfwindowuitrue
476 \Hy@pdfdisplaydoctitlefalse
477 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

480 \newdimen\@linkdim
481 \let\Hy@driver\ltx@empty
482 \let\MaybeStopEarly\relax
483 \newcount\Hy@linkcounter
484 \newcount\Hy@pagecounter
485 \Hy@linkcounter0
486 \Hy@pagecounter0

```

5.1 Macros for recursions

```

487 \let\Hy@ReturnEnd\@empty
488 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
489 \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.

\Hy@safe@activesfalse

```

490 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
491 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

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

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

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

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalcbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalcbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalcbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalcbpdef`. Limitations:
 - Works only in options that use `\hypercalcbpdef` (currently only `pdfstartview`).
 - For calculations package `calc` has to be loaded.
 - The expansion of the argument is done at definition time.

Example (TeX):

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

`\hypercalcbp`

```
492 \begingroup\expandafter\expandafter\expandafter\endgroup
493 \expandafter\ifx\csname dimexpr\endcsname\relax
494   \def\hypercalcbpdef#1#2{%
495     \begingroup
496       \toks@{}%
497       \HyCal@scan#2\hypercalcbp\@nil
498     \expandafter\endgroup
499     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
500   }%
501   \def\HyCal@scan#1\hypercalcbp#2\@nil{%
502     \toks@\expandafter{\the\toks@ #1}%
503     \ifx\#2\%
504       \else
505         \ltx@ReturnAfterFi{%
506           \HyCal@do#2\@nil
507         }%
508       \fi
509     }%
510   \def\HyCal@do#1#2\@nil{%
511     \@ifpackageloaded{calc}{%}{%
512       \Hy@Warning{%
513         For calculations \string\hypercalcbp\space needs\MessageBreak
514         package calc or e-TeX%
515       }%
516     }%
```

```

517 \setlength{\dimen@}{#1}%
518 \setlength{\dimen@}{0.99626401\dimen@}%
519 \edef\x{%
520   \toks@{%
521     \the\toks@
522     \strip@pt\dimen@
523   }%
524 } \x
525 \HyCal@scan#2\@nil
526 }%
527 \else
528 \def\hypercalcbp#1{%
529   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
530 }%
531 \def\hypercalcbpdef{\def}%
532 \fi

```

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.

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

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

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

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

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

```
534 \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.

```
535 \escapechar`\%
```

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

```
536 \edef\0{\string\0}%
537 \edef\1{\string\1}%
538 \edef\2{\string\2}%
539 \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.

```
540 \ifHy@unicode
541 \edef\8{\string\8}%
542 \edef\9{\string\9}%
```

```

543 \fontencoding{PU}%
544 \HyPsd@UTFviii
545 \def\ifpdfstringunicode##1##2{##1}%
546 \else
547 \fontencoding{PD1}%
548 \def\ifpdfstringunicode##1##2{##2}%
549 \fi
550 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
551 \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).

```

552 \@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).

```

553 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

554 \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.

```

555 \let\{\textbraceleft
556 \let\}\textbraceright
557 \let\\\textbackslash
558 \let\#\textnumbersign
559 \let\$\textdollar
560 \let\%\textpercent
561 \let\&\textampersand
562 % \let\~\textasciitilde
563 \let\_ \textunderscore
564 \let\P\textparagraph
565 \let\ldots\textellipsis
566 \let\dots\textellipsis
567 \ltx@ifundefined{textEncodingNoboundary}%
568 {}{\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.

```
569 \def\{\pdfstringdefWarn\}%
570 \def\newline{\pdfstringdefWarn\newline}%
```

Logos. Because the box shifting used in the T_EX logo does not work while writing to a file, the standard T_EX logos are redefined.

```
571 \def\TeX{\TeX}%
572 \def\LaTeX{La\TeX}%
573 \def\LaTeXe{%
574   \LaTeX2%
575   \ifHy@unicode\textepsilon\else e\fi
576 }%
577 \def\eTeX{%
578   \ifHy@unicode\textepsilon\else e\fi
579   -\TeX%
580 }%
581 \def\SliTeX{Sli\TeX}%
582 \def\MF{Metafont}%
583 \def\MP{Metapost}%
```

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

```
584 \let\fontencoding\@gobble
585 \let\fontfamily\@gobble
586 \let\fontseries\@gobble
587 \let\fontshape\@gobble
588 \let\fontsize\@gobbletwo
589 \let\selectfont\@empty
590 \let\usefont\@gobblefour
591 \let\emph\@firstofone
592 \let\textnormal\@firstofone
593 \let\textrm\@firstofone
594 \let\textsf\@firstofone
595 \let\texttt\@firstofone
596 \let\textbf\@firstofone
597 \let\textmd\@firstofone
598 \let\textit\@firstofone
599 \let\textsc\@firstofone
600 \let\textsl\@firstofone
601 \let\textup\@firstofone
602 \let\normalfont\@empty
603 \let\rmfamily\@empty
604 \let\sffamily\@empty
605 \let\ttfamily\@empty
606 \let\bfseries\@empty
607 \let\mdseries\@empty
608 \let\itshape\@empty
609 \let\scshape\@empty
610 \let\slshape\@empty
611 \let\upshape\@empty
612 \let\em\@empty
```

```

613 \let\rm\@empty
614 \let\Huge\@empty
615 \let\LARGE\@empty
616 \let\Large\@empty
617 \let\footnotesize\@empty
618 \let\huge\@empty
619 \let\large\@empty
620 \let\normalsize\@empty
621 \let\scriptsize\@empty
622 \let\small\@empty
623 \let\tiny\@empty
624 \let\mathversion\@gobble
625 \let\phantom\@gobble
626 \let\vphantom\@gobble
627 \let\hphantom\@gobble

```

Package pifont.

```

628 \let\ding\HyPsd@ding
629 \let\Cube\HyPsd@DieFace
630 %* \HyPsd@DieFace -> \epsdice (epsdice)
631 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

632 \def\begin#1{\csname#1\endcsname}%
633 \def\end#1{\csname end#1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

635 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
636 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

637 \ifHy@psdextra
638 \ifHy@unicode
639 \csname psdmapshortnames\endcsname
640 \csname psdaliasnames\endcsname
641 \fi
642 \fi

```

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

```

643 \let\foreignlanguage\@secondoftwo
644 \let\textlatin\@firstofone
645 \ltx@ifundefined{language@group}{\}%
646 \let\bbl@info\@gobble
647 \csname HyPsd@babel@\language@group\endcsname
648 }%
649 \HyPsd@GreekPatch
650 \HyPsd@SpanishPatch
651 \HyPsd@RussianPatch

```

```

652 \HyPsd@BabelPatch
653 \let\@safe@activetrue\relax
654 \let\@safe@activesfalse\relax

  Disable \cyr, used in russianb.ldf.
655 \let\cyr\relax

  Redefine \es@roman, used in spanish.ldf.
656 \let\es@roman\@Roman

```

Package german.

```

657 \let\glqq\textglqq
658 \let\grqq\textgrqq
659 \let\glq\textglq
660 \let\grq\textgrq
661 \let\flqq\textflqq
662 \let\frqq\textfrqq
663 \let\flq\textflq
664 \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}

665 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

666 \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.

```

667 \let\hspace\HyPsd@hspace

```

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

```

668 \let\label\@gobble
669 \let\index\@gobble
670 \let\glossary\@gobble
671 \let\href\HyPsd@href
672 \let\@mkboth\@gobbletwo

  The \ref and \pageref is much more complicate because of their star form.
673 \let\ref\HyPsd@ref
674 \let\pageref\HyPsd@pageref
675 \let\nameref\HyPsd@nameref
676 \let\autoref\HyPsd@autoref

```


Miscellaneous commands.

```
677 \let\leavevmode\@empty
678 \let\mbox\@empty
```

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

```
679 \def\halign{\pdfstringdefWarn\halign\@gobble}%
680 \let\ignorespaces\HyPsd@ignorespaces
681 \let\Hy@SectionAnchorHref\@gobble
682 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
683 \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@testopt`, and `\@ifnextchar` for `\renewcommand`).

```
684 \Hy@pdfstringtrue
685 \pdfstringdefPreHook
```

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

```
686 \HyPsd@LetUnexpandableSpace\space
687 \HyPsd@LetUnexpandableSpace\ %
688 \HyPsd@LetUnexpandableSpace~%
689 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package `xspace`.

```
690 \ltx@ifundefined{@xspace}{%
691 \let\xspace\HyPsd@ITALCORR
692 }{%
693 \let\xspace\HyPsd@XSPACE
694 }%
695 \let\/\HyPsd@ITALCORR
696 \let\bgroup\/%
697 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
698 \let\discretionary\@gobbletwo
```

`\@ifstar` is defined in \LaTeX 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:

```
699 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
700 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
701 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
702 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package ‘xargs’:

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

`\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 \TeX 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. \TeX 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 \LaTeX ’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 \LaTeX 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 \TeX , 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).

```
704 \begingroup
705 \let\GenericError\@gobblefour
706 \let\GenericWarning\@gobbletwo
707 \let\GenericInfo\@gobbletwo
```

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

```

708 \ifx\nofrenchguillemets\@undefined
709 \else
710 \nofrenchguillemets
711 \fi

```

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

```

712 \let\Hy@temp\xdef
713 \let\def\HyPsd@DefCommand
714 \let\gdef\HyPsd@DefCommand
715 \let\edef\HyPsd@DefCommand
716 \let\xdef\HyPsd@DefCommand
717 \let\futurelet\HyPsd@LetCommand
718 \let\let\HyPsd@LetCommand
719 \Hy@temp#1{#2}%
720 \endgroup

```

6.2.3 Postprocessing

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

```

721 \ifx#1\@empty
722 \else

```

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

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

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

```

723 \HyPsd@ProtectSpaces#1%
724 \let\HyPsd@String\@empty
725 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
726 \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.

```

727 \let\HyPsd@SPACEOPTI\relax
728 {%
729 \let\HyPsd@String\@empty
730 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
731 \global\let#1\HyPsd@String
732 }%
733 \expandafter\HyPsd@RemoveMask\expandafter
734 |\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.

```

735 \expandafter
736 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
737 \let\HyPsd@String\@empty
738 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
739 \global\let#1\HyPsd@String
```

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

```
740 \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 `\guillemotright`, because `\lastskip` and `\unskip` do not work. Therefore it is removed here.

```

741 \ifHy@unicode
742 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
743 \HyPsd@SPACEOPTI#1%
744 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
745 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
746 {\HyPsd@SPACEOPTI\80\273}#1%
747 \else
748 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
749 \expandafter\HyPsd@Subst\expandafter{%
750 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
751 \string\273}\HyPsd@SPACEOPTI\273}#1%
752 \fi

```

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

```

753 \ifHy@unicode
754 \HyPsd@StringSubst{\}){\80\051}#1%
755 \HyPsd@Subst){\80\051}#1%
756 \let\HyPsd@empty\relax
757 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
758 {\HyPsd@empty\80\051}#1%
759 \else
760 \HyPsd@StringSubst{\}){\051}#1%
761 \HyPsd@Subst){\051}#1%
762 \let\HyPsd@empty\relax
763 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
764 \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`.

```

765 \expandafter\HyPsd@Subst\expandafter{\//}\HyPsd@empty#1%
766 \ltx@ifundefined{@xspace}{%
767 }{%
768 \let\HyPsd@xspace\relax
769 \expandafter\HyPsd@Subst\expandafter
770 {\HyPsd@XSPACE}\HyPsd@xspace#1%
771 \let\HyPsd@xspace\HyPsd@doxspace
772 }%
773 \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.

```

774 \HyPsd@Subst{---}\textemdash#1%
775 \HyPsd@Subst{--}\textendash#1%
776 % \HyPsd@Subst{fi}\textfi#1%
777 % \HyPsd@Subst{fl}\textfl#1%
778 \HyPsd@Subst{!}\textexclamdown#1%
779 \HyPsd@Subst{?}\textquestiondown#1%
```

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

```

780 \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.

```

781 \ifHy@unicode
782 \HyPsd@StringSubst\(\textparenleft#1%
783 \HyPsd@Subst\(\textparenleft#1%
784 \else
785 \HyPsd@StringSubst\({\050}#1%
786 \HyPsd@Subst({\050}#1%
787 \HyPsd@StringSubst{\050}{\string\{ }#1%
788 \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.

```

789 \ifHy@unicode
790 \edef\HyPsd@SPACEOPTI{\80\040}%
791 \else
792 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
793 \fi
794 \xdef#1{#1\@empty}%
795 \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.

```

796 \endgroup
797 \begingroup
798 \ifHy@unicode
799 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```

800 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
801 \ltx@ifundefined{StringEncodingConvertTest}{%
802 }{%
803 \EdefUnescapeString\HyPsd@temp#1%
804 \ifxetex
805 \let\HyPsd@UnescapedString\HyPsd@temp
806 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
807 {utf16be}{ascii-print}{%
808 \EdefEscapeString\HyPsd@temp\HyPsd@temp
809 \global\let#1\HyPsd@temp
810 \HyPsd@EscapeTeX#1%
811 \Hy@unicodedefalse
812 }{%
813 \HyPsd@ToBigChars#1%
814 \HyPsd@EscapeTeX#1%
815 }%
816 \else
817 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
818 {utf16be}{pdfdoc}{%
819 \EdefEscapeString\HyPsd@temp\HyPsd@temp
820 \global\let#1\HyPsd@temp
821 \HyPsd@EscapeTeX#1%
822 \Hy@unicodedefalse
823 }{}%
824 \fi
825 }%
826 \fi
827 \fi
828 \HyPsd@XeTeXBigCharsfalse

```

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

```

829 \pdfstringdefPostHook#1%
830 \endgroup
831 }

```

`\Hy@pdfstringdef`

```

832 \def\Hy@pdfstringdef#1#2{%
833 \pdfstringdef\Hy@gtemp{#2}%
834 \let#1\Hy@gtemp
835 }

```

6.3 Encodings

6.3.1 XeTeX

```

836 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
837 \catcode\z@=12 %
838 \ifxetex
839 \expandafter\@firstofone
840 \else
841 \let\HyPsd@XeTeXBigCharstrue\@empty
842 \let\HyPsd@XeTeXBigCharsfalse\@empty
843 \expandafter\@gobble
844 \fi
845 {%

```

```

846 \newif\ifHyPsd@XeTeXBigChars
847 \def\HyPsd@XeTeXBigCharsfalse{%
848   \global\let\ifHyPsd@XeTeXBigChars\iffalse
849 }%
850 \def\HyPsd@XeTeXBigCharstrue{%
851   \global\let\ifHyPsd@XeTeXBigChars\iftrue
852 }%
853 \def\HyPsd@ToBigChars#1{%
854   \ifHyPsd@XeTeXBigChars
855     \edefEscapeHex\HyPsd@UnescapedString{%
856       \expandafter\@gobbletwo\HyPsd@UnescapedString
857     }%
858     \begingroup
859     \toks@{}%
860     \escapechar=92\relax
861     \let\x\HyPsd@ToBigChar
862     \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
863     \relax\relax\relax\relax\relax\relax\relax
864     \edef\x{%
865       \endgroup
866       \gdef\noexpand#1{\the\toks@}%
867     }%
868     \x
869   \fi
870 }%
871 \def\HyPsd@ToBigChar#1#2#3#4{%
872   \ifx\relax#1\relax
873     \let\x\relax
874   \else
875     \count@=#1#2#3#4\relax
876     \let\y\@empty
877     \lccode\z=\count@
878     \ifnum\count@=40 % (
879       \let\y\@backslashchar
880     \else
881       \ifnum\count@=41 % )
882         \let\y\@backslashchar
883       \else
884         \ifnum\count@=92 % backslash
885           \let\y\@backslashchar
886         \else
887           \ifnum\count@=10 % newline
888             \edef\y##1{\string\n}%
889           \else
890             \ifnum\count@=13 % carriage return
891               \edef\y##1{\string\r}%
892             \fi
893           \fi
894         \fi
895       \fi
896     \fi
897     \lowercase{%
898       \toks@\expandafter{%
899         \the\expandafter\toks@
900       }%
901       \y
902     }%

```



```

903 }%
904 \fi
905 \x
906 }%
907 }
908 \Hy@temp

```

6.3.2 Workaround for package linguex

```

909 \@ifpackageloaded{linguex}{%
910 \let\HyLinguex@OrgB\b
911 \let\HyLinguex@OrgC\c
912 \let\HyLinguex@OrgD\d
913 \def\HyLinguex@Restore{%
914 \let\b\HyLinguex@OrgB
915 \let\c\HyLinguex@OrgC
916 \let\d\HyLinguex@OrgD
917 }%
918 \Hy@AtEndOfPackage{%
919 \pdfstringdefDisableCommands{%
920 \ltx@ifundefined{oldb}{\let\b\oldb}%
921 \ltx@ifundefined{oldc}{\let\c\oldc}%
922 \ltx@ifundefined{oldd}{\let\d\oldd}%
923 }%
924 }%
925 }{%
926 \let\HyLinguex@Restore\relax
927 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

928 \def\Hy@SaveCatcodeSettings#1{%
929 \expandafter\edef\csname Hy@cat@#1\endcsname{%
930 \endlinechar=\the\endlinechar\relax
931 \catcode32 \the\catcode32\relax % (space)
932 \catcode34 \the\catcode34\relax % "
933 \catcode35 \the\catcode35\relax % #
934 \catcode37 \the\catcode37\relax % (percent)
935 \catcode40 \the\catcode40\relax % (
936 \catcode41 \the\catcode41\relax % )
937 \catcode42 \the\catcode42\relax % *
938 \catcode46 \the\catcode46\relax % .
939 \catcode58 \the\catcode58\relax % :
940 \catcode60 \the\catcode60\relax % <
941 \catcode61 \the\catcode61\relax % =
942 \catcode62 \the\catcode62\relax % >
943 \catcode64 \the\catcode64\relax % @
944 \catcode91 \the\catcode91\relax % [
945 \catcode92 \the\catcode92\relax % \
946 \catcode93 \the\catcode93\relax % ]
947 \catcode123 \the\catcode123\relax % {
948 \catcode124 \the\catcode124\relax % |
949 \catcode125 \the\catcode125\relax % }
950 }%
951 \endlinechar=-1 %
952 \catcode32 10 % (space)
953 \catcode34 12 % "
954 \catcode35 6 % #

```

```

955 \catcode37 14 % (percent)
956 \catcode40 12 % (
957 \catcode41 12 % )
958 \catcode42 12 % *
959 \catcode46 12 % .
960 \catcode58 12 % :
961 \catcode60 12 % <
962 \catcode61 12 % =
963 \catcode62 12 % >
964 \catcode91 12 % [
965 \catcode92 0 % \
966 \catcode93 12 % ]
967 \catcode123 1 % {
968 \catcode124 12 % |
969 \catcode125 2 % }
970 \makeatletter
971 }

```

`\Hy@RestoreCatcodeSettings`

```

972 \def\Hy@RestoreCatcodeSettings#1{%
973   \csname Hy@cat@#1\endcsname
974   \expandafter\let\csname Hy@cat@#1\endcsname\relax
975 }

```

6.3.4 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with $\text{\LaTeX} 2_{\epsilon}$'s NFSS. Because the informational strings are not set by \TeX '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 \TeX does not process it anyway. So use CM.

```

976 \@ifundefined{T@PD1}{%
977   \Hy@SaveCatcodeSettings{pd1}%
978   \input{pd1enc.def}%
979   \Hy@RestoreCatcodeSettings{pd1}%
980   \HyLinguex@Restore
981 }{}
982 \DeclareFontFamily{PD1}{pdf}{}
983 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
984 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.5 PU encoding

The PU encoding implements the Unicode encoding for use with \LaTeX 's NFSS. Because of large memory requirements the encoding file for Unicode support is only loaded, if option `unicode` is specified as package 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`.

```

985 \def\HyPsd@LoadUnicode{%
986   \@ifundefined{T@PU}{%
987     \Hy@SaveCatcodeSettings{pu}%
988     \input{puenc.def}%
989     \Hy@RestoreCatcodeSettings{pu}%

```

```

990 \HyLinguex@Restore
991 }{}%
992 \DeclareFontFamily{PU}{pdf}{}%
993 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
994 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
995 \HyPsd@LoadExtra
996 \let\HyPsd@LoadUnicode\relax
997 }

```

`\HyPsd@LoadExtra`

```

998 \def\HyPsd@LoadExtra{%
999 \ifHy@psdextra
1000 \ltx@iffileloaded{puenc.def}{%
1001 \Hy@SaveCatcodeSettings{psdextra}%
1002 \input{psdextra.def}%
1003 \Hy@RestoreCatcodeSettings{psdextra}%
1004 \let\HyPsd@LoadExtra\relax
1005 }{}%
1006 \fi
1007 }

```

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 $\mathrm{T}_{\mathrm{E}}\mathrm{X}$'s stomach, the second contains the replacement for PDF strings.

```

1008 \def\texorpdfstring{%
1009 \ifHy@pdfstring
1010 \expandafter\@secondoftwo
1011 \else
1012 \expandafter\@firstoftwo
1013 \fi
1014 }

```

6.4.2 Hooks for `\pdfstringdef`

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

```

\pdfstringdefPostHook
1015 \@ifundefined{pdfstringdefPreHook}{%
1016 \let\pdfstringdefPreHook\@empty
1017 }{}
1018 \@ifundefined{pdfstringdefPostHook}{%
1019 \let\pdfstringdefPostHook\@gobble
1020 }{}

```

`\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`.

```

1021 \def\pdfstringdefDisableCommands{%
1022   \begingroup
1023   \makeatletter
1024   \HyPsd@DisableCommands
1025 }

```

`\HyPsd@DisableCommands`

```

1026 \long\def\HyPsd@DisableCommands#1{%
1027   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1028   \endgroup
1029 }

```

(Partial) fix for bug in frenchb.ldf 2010/08/21 v2.5a that destroys `\pdfstringdefDisableCommands` after usage in `\AtBeginDocument`.

```

1030 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
1031 \AtBeginDocument{%
1032   \ifundefined{pdfstringdefDisableCommands}{%
1033     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
1034   }{}%
1035 }

```

`\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`.

```

1036 \def\pdfstringdefWarn#1{%
1037   \expandafter\noexpand\csname<>-string#1\endcsname
1038 }

```

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.

```

1039 \begingroup
1040   \catcode0=12 %
1041   \def\x{\endgroup
1042     \def\HyPsd@ignorespaces{%

```

```

1043 \romannumeral\expandafter`\expandafter^^@%
1044 \romannumeral^^@%
1045 }%
1046 }%
1047 \x

```

6.5.2 Babel languages

Since version 2008/03/16 v3.8j babel uses inside `\AtBeginDocument`:

```

\pdfstringdefDisableCommands{%
  \languageshorthands{system}%
}

```

As consequence the shorthands are shown in the bookmarks, not its result. Therefore `\languageshorthands` is disabled before the user hook. If there is a need to use the command, then `\HyOrg@languageshorthands` can be used inside `\pdfstringdefDisableCommands`.

```

1048 \def\HyPsd@BabelPatch{%
1049   \let\HyOrg@languageshorthands\languageshorthands
1050   \let\languageshorthands\HyPsd@LanguageShorthands
1051 }
1052 \begingroup\expandafter\expandafter\expandafter\endgroup
1053 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
1054   \let\HyPsd@langshort@system\@empty
1055   \def\HyPsd@LanguageShorthands#1{%
1056     \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
1057       \HyPsd@langshort@system
1058     \expandafter\@gobble
1059   \else
1060     \expandafter\@firstofone
1061   \fi
1062   {%
1063     \HyOrg@languageshorthands{#1}%
1064   }%
1065 }%
1066 \else
1067   \def\HyPsd@LanguageShorthands#1{%
1068     \ifnum\pdf@strcmp{#1}{system}=\z@
1069       \expandafter\@gobble
1070     \else
1071       \expandafter\@firstofone
1072     \fi
1073     {%
1074       \HyOrg@languageshorthands{#1}%
1075     }%
1076   }%
1077 \fi
1078 \def\Hy@temp{%
1079   \@ifpackageloaded{babel}{%
1080     \@ifpackagelater{babel}{2008/03/16}{%
1081       \let\Hy@temp\@empty
1082     }{%
1083       \def\HyPsd@BabelPatch{%
1084         \let\HyOrg@languageshorthands\languageshorthands
1085       }%
1086     }%
1087   }{%

```

```

1088 }
1089 \Hy@temp
1090 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1091 \newif\ifHy@next

    Nothing to do for english.
1092 \ltx@ifundefined{danish@sh@}{@sel}{-}{-}%
1093 \def\HyPsd@babel@danish{%
1094   \declare@shorthand{danish}{-}{-}%
1095   \declare@shorthand{danish}{-}{-}%
1096 }%
1097 }
1098 \ltx@ifundefined{dutch@sh@}{@sel}{-}{-}%
1099 \def\HyPsd@babel@dutch{%
1100   \declare@shorthand{dutch}{-}{-}%
1101   \declare@shorthand{dutch}{-}{-}%
1102 }%
1103 }
1104 \ltx@ifundefined{finnish@sh@}{@sel}{-}{-}%
1105 \def\HyPsd@babel@finnish{%
1106   \declare@shorthand{finnish}{-}{-}%
1107 }%
1108 }
1109 \ltx@ifundefined{french@sh@}{@sel}{-}{-}%
1110 \def\HyPsd@babel@frenchb{%
1111   \def\guill@spacing{ }%
1112 }%
1113 }
1114 \ltx@ifundefined{german@sh@}{@sel}{-}{-}%
1115 \def\HyPsd@babel@german{%
1116   \declare@shorthand{german}{f}{f}%
1117   \declare@shorthand{german}{-}{-}%
1118   \declare@shorthand{german}{-}{-}%
1119 }%
1120 }
1121 \ltx@ifundefined{macedonian@sh@}{@sel}{-}{-}%
1122 \def\HyPsd@babel@macedonian{%
1123   \declare@shorthand{macedonian}{-}{-}%
1124   \declare@shorthand{macedonian}{-}{-}%
1125 }%
1126 }{}
1127 \ltx@ifundefined{ngerman@sh@}{@sel}{-}{-}%
1128 \def\HyPsd@babel@ngerman{%
1129   \declare@shorthand{ngerman}{-}{-}%
1130   \declare@shorthand{ngerman}{-}{-}%
1131 }%
1132 }
1133 \ltx@ifundefined{portuges@sh@}{@sel}{-}{-}%
1134 \def\HyPsd@babel@portuges{%
1135   \declare@shorthand{portuges}{-}{-}%
1136 }%
1137 }
1138 \ltx@ifundefined{russian@sh@}{@sel}{-}{-}%
1139 \def\HyPsd@babel@russian{%
1140   \declare@shorthand{russian}{-}{-}%
1141   \declare@shorthand{russian}{-}{-}%
1142 }%

```

```

1143 }
1144 \ltx@ifundefined{slovene@sh@{@sel}}{%
1145   \def\HyPsd@babel@slovene{%
1146     \declare@shorthand{slovene}{"}{|}%
1147   }%
1148 }

```

Nested quoting environments are not supported (<<, >>).

```

1149 \ltx@ifundefined{spanish@sh@>@sel}}{%
1150   \def\HyPsd@babel@spanish{%
1151     \declare@shorthand{spanish}{<<}{\guillemotleft}%
1152     \declare@shorthand{spanish}{>>}{\guillemotright}%
1153     \declare@shorthand{spanish}{"}{'}%
1154     \declare@shorthand{spanish}{"}{'}%
1155     \declare@shorthand{spanish}{!}{\textexclamdown}%
1156     \declare@shorthand{spanish}{?}{\textquestiondown}%
1157   }%
1158 }
1159 \ltx@ifundefined{swedish@sh@{@sel}}{%
1160   \def\HyPsd@babel@swedish{%
1161     \declare@shorthand{swedish}{"}{|}%
1162     \declare@shorthand{swedish}{"}{'}%
1163   }%
1164 }
1165 \ltx@ifundefined{ukrainian@sh@{@sel}}{%
1166   \def\HyPsd@babel@ukrainian{%
1167     \declare@shorthand{ukrainian}{"}{|}%
1168     \declare@shorthand{ukrainian}{"}{'}%
1169   }%
1170 }
1171 \ltx@ifundefined{usorbian@sh@{@sel}}{%
1172   \def\HyPsd@babel@usorbian{%
1173     \declare@shorthand{usorbian}{"}{f}%
1174     \declare@shorthand{usorbian}{"}{|}%
1175   }%
1176 }
1177 \ltx@ifundefined{greek@sh@\string-@sel}}{%
1178   \let\HyPsd@GreekPatch\@empty
1179 }{%
1180   \def\HyPsd@GreekPatch{%
1181     \let\greeknumeral\HyPsd@greeknumeral
1182     \let\Greeknumeral\HyPsd@Greeknumeral
1183   }%
1184 }
1185 \def\HyPsd@greeknumeral#1{%
1186   \HyPsd@GreekNum\@firstoftwo{#1}%
1187 }
1188 \def\HyPsd@Greeknumeral#1{%
1189   \HyPsd@GreekNum\@secondoftwo{#1}%
1190 }
1191 \def\HyPsd@GreekNum#1#2{%
1192   \ifHy@unicode
1193     \ifnum#2<\@ne
1194       \@arabic{#2}%
1195     \else
1196       \ifnum#2<1000000 %
1197         \HyPsd@@GreekNum#1{#2}%
1198       \else

```

```

1199     \@arabic{#2}%
1200     \fi
1201   \fi
1202 \else
1203   \@arabic{#2}%
1204   \fi
1205 }
1206 \def\HyPsd@@GreekNum#1#2{%
1207   \ifnum#2<\@m
1208     \ifnum#2<10 %
1209       \expandafter\HyPsd@GreekNumI
1210       \expandafter\@gobble\expandafter#1\number#2%
1211     \else
1212       \ifnum#2<100 %
1213         \expandafter\HyPsd@GreekNumII
1214         \expandafter\@gobble\expandafter#1\number#2%
1215       \else
1216         \expandafter\HyPsd@GreekNumIII
1217         \expandafter\@gobble\expandafter#1\number#2%
1218       \fi
1219     \fi
1220     \ifnum#2>\z@
1221       \textnumeralsigngreek
1222     \fi
1223 \else
1224   \ifnum#2<\@M
1225     \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1226   \else
1227     \ifnum#2<100000 %
1228       \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1229     \else
1230       \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1231     \fi
1232   \fi
1233 \fi
1234 }
1235 \def\HyPsd@GreekNumI#1#2#3{%
1236   #1{%
1237     \ifnum#3>\z@
1238       \textnumeralsignlowergreek
1239     \fi
1240   }%
1241   \expandafter#2%
1242   \ifcase#3 %
1243     {}{}%
1244     \or\textalpha\textAlpha
1245     \or\textbeta\textBeta
1246     \or\textgamma\textGamma
1247     \or\textdelta\textDelta
1248     \or\textepsilon\textEpsilon
1249     \or\textstigmagreek\textStigmagreek
1250     \or\textzeta\textZeta
1251     \or\texteta\textEta
1252     \or\texttheta\textTheta
1253   \else
1254     {}{}%
1255   \fi

```



```

1256 }
1257 \def\HyPsd@GreekNumII#1#2#3#4{%
1258   #1{%
1259     \ifnum#3>\z@
1260       \textnumeralsignlowergreek
1261     \fi
1262   }%
1263   \expandafter#2%
1264   \ifcase#3 %
1265     {}{}%
1266     \or\textiota\textIota
1267     \or\textkappa\textKappa
1268     \or\textlambda\textLambda
1269     \or\textmu\textMu
1270     \or\textnu\textNu
1271     \or\textxi\textXi
1272     \or\textomicron\textOmicron
1273     \or\textpi\textPi
1274     \or\textkoppagreek\textKoppagreek
1275     \else
1276       {}{}%
1277     \fi
1278   \HyPsd@GreekNumI#1#2#4%
1279 }
1280 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1281   #1{%
1282     \ifnum#3>\z@
1283       \textnumeralsignlowergreek
1284     \fi
1285   }%
1286   \expandafter#2%
1287   \ifcase#3 %
1288     {}{}%
1289     \or\textrho\textRho
1290     \or\textsigma\textSigma
1291     \or\texttau\textTau
1292     \or\textupsilon\textUpsilon
1293     \or\textphi\textPhi
1294     \or\textchi\textChi
1295     \or\textpsi\textPsi
1296     \or\textomega\textOmega
1297     \or\textsampigreek\textSampigreek
1298     \else
1299       {}{}%
1300     \fi
1301   \HyPsd@GreekNumII#1#2#4#5%
1302 }
1303 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1304   \HyPsd@GreekNumI\@firstofone#1#2%
1305   \HyPsd@@@GreekNum#1{#3#4#5}%
1306 }
1307 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1308   \HyPsd@GreekNumII\@firstofone#1#2#3%
1309   \HyPsd@@@GreekNum#1{#4#5#6}%
1310 }
1311 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1312   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%

```

```

1313 \HyPsd@@GreekNum#1{#5#6#7}%
1314 }

1315 \def\HyPsd@SpanishPatch{%
1316 \ltx@ifundefined{es@save@dot}{%
1317 }{%
1318 \let\.\es@save@dot
1319 }%
1320 }

```

Shorthand "-" of "russianb.ldf" is not expandable, therefore it is disabled and replaced by -.

```

1321 \def\HyPsd@RussianPatch{%
1322 \ltx@ifundefined{russian@sh@"@-@}{%
1323 }{%
1324 \@namedef{russian@sh@"@-@}{-}%
1325 }%
1326 }

```

6.5.3 CJK patch

```

1327 \RequirePackage{intcalc}[2007/09/27]

\HyPsd@CJKhook

1328 \def\HyPsd@CJKhook{%
1329 \ltx@ifpackageloaded{CJK}{%
1330 \let\CJK@kern\relax
1331 \let\CJKkern\relax
1332 \let\CJK@CJK\relax
1333 \ifHy@CJKbookmarks
1334 \HyPsd@CJKhook@bookmarks
1335 \fi
1336 \HyPsd@CJKhook@unicode
1337 }{%
1338 }

```

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 ($\geq 0x40$).

```

1339 \begingroup
1340 \catcode"7F=\active
1341 \toks@{%
1342 \let\CJK@ignorespaces\empty
1343 \def\CJK@char#1{\@gobbletwo}%
1344 \let\CJK@charx\@gobblefour
1345 \let\CJK@punctchar\@gobblefour
1346 \def\CJK@punctcharx#1{\@gobblefour}%
1347 \catcode"7F=\active
1348 \def^^7f#1^^7f#2^^7f{%

```

```

1349 \string #1\HyPsd@DecimalToOctal{#2}%
1350 }%
1351 % ... ?
1352 \ifHy@unicode
1353 \def\Hy@cjkpu{\80}%
1354 \else
1355 \let\Hy@cjkpu\@empty
1356 \fi
1357 \HyPsd@CJKActiveChars
1358 }%
1359 \count@=127 %
1360 \@whilenum\count@<255 \do{%
1361 \advance\count@ by 1 %
1362 \lccode\~=\count@
1363 \lowercase{%
1364 \toks@\expandafter{\the\toks@ ~}%
1365 }%
1366 }%
1367 \toks@\expandafter{\the\toks@ !}%
1368 \xdef\HyPsd@CJKhook@bookmarks{%
1369 \the\toks@
1370 }%
1371 \endgroup

```

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

```

1372 \def\HyPsd@CJKActiveChars#1{%
1373 \ifx#1!%
1374 \let\HyPsd@CJKActiveChars\relax
1375 \else
1376 \edef#1{\noexpand\Hy@cjkpu\string#1}%
1377 \fi
1378 \HyPsd@CJKActiveChars
1379 }

```

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

```

1380 \def\HyPsd@DecimalToOctal#1{%
1381 \ifcase #1 %
1382 \or \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1383 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1384 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1385 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1386 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1387 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1388 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1389 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1390 \or @\or A\or B\or C\or D\or E\or F\or G%
1391 \or H\or I\or J\or K\or L\or M\or N\or O%
1392 \or P\or Q\or R\or S\or T\or U\or V\or W%
1393 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1394 \or \140\or a\or b\or c\or d\or e\or f\or g%
1395 \or h\or i\or j\or k\or l\or m\or n\or o%
1396 \or p\or q\or r\or s\or t\or u\or v\or w%
1397 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1398 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1399 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1400 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%

```

```

1401 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1402 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1403 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1404 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1405 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1406 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1407 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1408 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1409 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1410 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1411 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1412 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1413 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1414 \fi
1415 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1416 \def\HyPsd@CJKhook@unicode{%
1417 \let\Unicode\HyPsd@CJK@Unicode
1418 \let\CJKnumber\HyPsd@CJKnumber
1419 \let\CJKdigits\HyPsd@CJKdigits
1420 }

```

\HyPsd@CJK@Unicode

```

1421 \def\HyPsd@CJK@Unicode#1#2{%
1422 \ifnum#1<256 %
1423 \HyPsd@DecimalToOctalFirst{#1}%
1424 \HyPsd@DecimalToOctalSecond{#2}%
1425 \else
1426 \933%
1427 \expandafter\expandafter\expandafter\HyPsd@HighA
1428 \intcalcDiv{#1}{4}!%
1429 \933%
1430 \ifcase\intcalcMod{#1}{4} %
1431 4\or 5\or 6\or 7%
1432 \fi
1433 \HyPsd@DecimalToOctalSecond{#2}%
1434 \fi
1435 }

1436 \def\HyPsd@HighA#1!{%
1437 \expandafter\expandafter\expandafter\HyPsd@HighB
1438 \IntCalcDiv#1!64!!%
1439 \expandafter\expandafter\expandafter\HyPsd@HighD
1440 \IntCalcMod#1!64!!%
1441 }
1442 \def\HyPsd@HighB#1!{%
1443 \expandafter\expandafter\expandafter\HyPsd@HighC
1444 \IntCalcDec#1!!%
1445 }
1446 \def\HyPsd@HighC#1!{%
1447 \IntCalcDiv#1!4!%
1448 \@backslashchar
1449 \IntCalcMod#1!4!%
1450 }

```

```

1451 \def\HyPsd@HighD#1!{%
1452   \ifcase\IntCalcDiv#1!8! %
1453     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1454   \fi
1455   \ifcase\IntCalcMod#1!8! %
1456     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1457   \fi
1458 }
1459 \def\HyPsd@DecimalToOctalFirst#1{%
1460   \9%
1461   \ifcase#1 %
1462     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1463     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1464     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1465     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1466     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1467     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1468     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1469     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1470     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1471     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1472     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1473     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1474     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1475     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1476     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1477     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1478     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1479     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1480     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1481     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1482     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1483     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1484     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1485     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1486     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1487     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1488     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1489     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1490     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1491     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1492     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1493     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1494   \fi
1495 }
1496 \def\HyPsd@DecimalToOctalSecond#1{%
1497   \ifcase #1 %
1498     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1499     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1500     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1501     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1502     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1503     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1504     \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1505     \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1506     \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1507     \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%

```

```

1508 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1509 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1510 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1511 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1512 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1513 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1514 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1515 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1516 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1517 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1518 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1519 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1520 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1521 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1522 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1523 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1524 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1525 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1526 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1527 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1528 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1529 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1530 \fi
1531 }

1532 \def\HyPsd@CJKnumber#1{%
1533 \ifnum#1<\z@
1534 \CJK@minus
1535 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1536 \else
1537 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1538 \fi
1539 }

1540 \def\HyPsd@@CJKnumber#1{%
1541 \ifcase#1 %
1542 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1543 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1544 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1545 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1546 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1547 \CJK@ten\CJK@nine
1548 \else
1549 \ifnum#1<10000 %
1550 \HyPsd@CJKnumberFour#1!\@empty{20}%
1551 \@empty
1552 \else
1553 \ifnum#1<100000000 %
1554 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1555 \IntCalcDiv#1!10000!%
1556 !\{20}%
1557 \CJK@tenthousand
1558 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1559 \IntCalcMod#1!10000!%
1560 !\CJK@zero{10}%
1561 \@empty
1562 \else
1563 \expandafter\HyPsd@CJKnumberLarge
1564 \number\IntCalcDiv#1!100000000!\expandafter!%

```

```

1565     \number\IntCalcMod#1!100000000!!%
1566     \fi
1567   \fi
1568 \fi
1569 }
1570 \def\HyPsd@CJKnumberLarge#1!#2!{%
1571   \HyPsd@CJKnumberFour#1!{}{20}%
1572   \CJK@hundredmillion
1573   \ifnum#2=\z@
1574   \else
1575     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1576       \IntCalcDiv#2!10000!%
1577     !\CJK@zero{10}%
1578     \CJK@tenthousand
1579     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1580       \IntCalcMod#2!10000!%
1581     !\CJK@zero{10}%
1582     \@empty
1583   \fi
1584 }
1585 \def\HyPsd@CJKnumberFour#1!#2#3{%
1586   \ifnum#1=\z@
1587     \expandafter\@gobble
1588   \else
1589     \ifnum#1<1000 %
1590       #2%
1591       \HyPsd@CJKnumberThree#1!{}{#3}%
1592     \else
1593       \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1594       \CJK@thousand
1595       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1596         \IntCalcMod#1!1000!%
1597       !\CJK@zero{10}%
1598     \fi
1599   \fi
1600 }
1601 \def\HyPsd@CJKnumberThree#1!#2#3{%
1602   \ifnum#1=\z@
1603   \else
1604     \ifnum#1<100 %
1605       #2%
1606       \HyPsd@CJKnumberTwo#1!{}{#3}%
1607     \else
1608       \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1609       \CJK@hundred
1610       \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1611         \IntCalcMod#1!100!%
1612       !\CJK@zero{10}%
1613     \fi
1614   \fi
1615 }
1616 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1617   \ifnum#1=\z@
1618   \else
1619     \ifnum#1<#3 %
1620       #2%
1621       \HyPsd@@@CJKnumber{#1}%

```

```

1622 \else
1623 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1624 \CJK@ten
1625 \ifnum\IntCalcMod#1!10!=\z@
1626 \else
1627 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1628 \fi
1629 \fi
1630 \fi
1631 }

1632 \def\HyPsd@CJKdigits#1{%
1633 \ifx*#1\relax
1634 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1635 \else
1636 \HyPsd@@CJKdigits\CJK@null{#1}%
1637 \fi
1638 }

1639 \def\HyPsd@@CJKdigits#1#2{%
1640 \ifx\#2\%
1641 \else
1642 \HyPsd@@@CJKdigits#1#2\@nil
1643 \fi
1644 }%
1645 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1646 \HyPsd@CJKdigit#1{#2}%
1647 \ifx\#3\%
1648 \expandafter\@gobble
1649 \else
1650 \expandafter\@firstofone
1651 \fi
1652 {%
1653 \HyPsd@@@CJKdigits#1#3\@nil
1654 }%
1655 }

1656 \def\HyPsd@CJKdigit#1#2{%
1657 \ifcase#2 %
1658 #1\or
1659 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1660 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1661 \fi
1662 }

```

6.5.6 \@inmathwarn-Patch

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

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

```

\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}

1663 \def\HyPsd@inmathwarn#1#2{%
1664   \ifx#2\expandafter
1665     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1666       \HyPsd@GLYPHERR
1667       \expandafter\@gobble\string#1%
1668       >%
1669       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1670     \else
1671       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1672     \fi
1673   \else
1674     \expandafter#2%
1675   \fi
1676 }
1677 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1678 \def\HyPsd@EndWithElse#1\else\else}

```

\HyPsd@add@accent

```

1679 \def\HyPsd@add@accent#1#2{%
1680   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1681   #2%
1682 }%

```

6.5.7 Unexpandable spaces

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

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

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

```
1683 \def\HyPsd@LetUnexpandableSpace#1{%
1684   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1685 }
```

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

```
1686 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

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

```
1687 \edef\HyPsd@XSPACE{\string#\string X}
1688 \edef\HyPsd@ITALCORR{\string#\string I}
1689 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1690 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1691 \def\HyPsd@@hspace#1*##2\END{%
1692   \ifx\##2\%
1693     \HyPsd@hspacetest{#1}%
1694   \else
1695     \expandafter\HyPsd@hspacetest
1696   \fi
1697 }
```

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

```
1698 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1699 \ltx@ifundefined{tocsection}{%
1700   \let\HyPsd@AMSclassfix\relax
1701 }{%
1702   \def\HyPsd@AMSclassfix{%
1703     \let\tocpart\HyPsd@tocsection
1704     \let\tocchapter\HyPsd@tocsection
1705     \let\tocappendix\HyPsd@tocsection
1706     \let\tocsection\HyPsd@tocsection
1707     \let\tocsubsection\HyPsd@tocsection
1708     \let\tocsubsubsection\HyPsd@tocsection
1709     \let\tocparagraph\HyPsd@tocsection
1710   }%
```

```

1711 \def\HyPsd@tocsection#1#2#3{%
1712   \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1713   #3%
1714 }%
1715 }

```

6.5.11 Reference commands

`\HyPsd@href`

```
1716 \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.

```
1717 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```

1718 \def\HyPsd@@ref#1*#2\END{%
1719   \ifx\#2\%
1720     \HyPsd@@@ref{#1}%
1721   \else
1722     \expandafter\HyPsd@@@ref
1723   \fi
1724 }%

```

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

```

1725 \def\HyPsd@@@ref#1{%
1726   \expandafter\ifx\csname r@#1\endcsname\relax
1727     ??%
1728   \else
1729     \expandafter\expandafter\expandafter
1730     \@car\csname r@#1\endcsname\@nil
1731   \fi
1732 }

```

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

```
1733 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

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

```

1734 \def\HyPsd@@pageref#1*#2\END{%
1735   \ifx\#2\%
1736     \HyPsd@@@pageref{#1}%
1737   \else
1738     \expandafter\HyPsd@@@pageref
1739   \fi
1740 }

```

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

```

1741 \def\HyPsd@@@pageref#1{%
1742   \expandafter\ifx\csname r@#1\endcsname\relax
1743     ??%
1744   \else
1745     \expandafter\expandafter\expandafter\expandafter
1746     \expandafter\expandafter\expandafter\@car
1747     \expandafter\expandafter\expandafter\@gobble
1748     \csname r@#1\endcsname{}\@nil
1749   \fi
1750 }

```

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

```

1751 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*END}

```

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

```

1752 \def\HyPsd@@nameref#1*#2END{%
1753   \ifx\#2\%
1754     \HyPsd@@@nameref{#1}%
1755   \else
1756     \expandafter\HyPsd@@@nameref
1757   \fi
1758 }

```

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

```

1759 \def\HyPsd@@@nameref#1{%
1760   \expandafter\ifx\csname r@#1\endcsname\relax
1761     ??%
1762   \else
1763     \expandafter\expandafter\expandafter\expandafter
1764     \expandafter\expandafter\expandafter\@car
1765     \expandafter\expandafter\expandafter\@gobbletwo
1766     \csname r@#1\endcsname{}\}\@nil
1767   \fi
1768 }

```

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

```

1769 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*END}

```

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

```

1770 \def\HyPsd@@autoref#1*#2END{%
1771   \ifx\#2\%
1772     \HyPsd@@@autoref{#1}%
1773   \else
1774     \expandafter\HyPsd@@@autoref
1775   \fi
1776 }

```

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

```

1777 \def\HyPsd@@@autoref#1{%
1778   \expandafter\ifx\csname r@#1\endcsname\relax
1779     ??%
1780   \else
1781     \expandafter\expandafter\expandafter\HyPsd@autorefname
1782     \csname r@#1\endcsname{}\}\}\@nil
1783   \expandafter\expandafter\expandafter
1784   \@car\csname r@#1\endcsname\@nil
1785   \fi
1786 }

```

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

```

1787 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1788   \ifx\#4\%
1789   \else
1790     \HyPsd@@@autorefname#4.\@nil
1791   \fi
1792 }

```

`\HyPsd@@autorefname`

```

1793 \def\HyPsd@@autorefname#1.#2\@nil{%
1794   \ltx@ifundefined{#1autorefname}{}%
1795   \ltx@ifundefined{#1name}{}%
1796   }{%
1797     \csname#1name\endcsname\space
1798   }%
1799 }{%
1800   \csname#1autorefname\endcsname\space
1801 }%
1802 }

```

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

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

`\HyPsd@DefCommand`

`\HyPsd@LetCommand`

```

1803 \begingroup
1804   \def\x#1#2{%
1805     \endgroup
1806     \let#1\def
1807     \def\HyPsd@DefCommand##1##2###{%
1808       #1%
1809       \expandafter\noexpand
1810       \csname\expandafter\@gobble\string##1\@empty\endcsname
1811       \@gobble
1812     }%
1813     \let#2\let
1814     \def\HyPsd@@LetCommand##1{%
1815       \expandafter\ifx\csname##1\expandafter\endcsname

```

```

1816             \csname iftrue\endcsname
1817     \pdfstringdefWarn\let
1818     \expandafter\@gobble
1819   \else
1820     \expandafter\ifx\csname##1\expandafter\endcsname
1821       \csname iffalse\endcsname
1822       \pdfstringdefWarn\let
1823       \expandafter\expandafter\expandafter\@gobble
1824     \else
1825       #2%
1826       \expandafter\noexpand
1827       \csname##1\expandafter\expandafter\expandafter\endcsname
1828     \fi
1829   \fi
1830 }%
1831 }%
1832 \expandafter\x\csname <def>-command\expandafter\endcsname
1833       \csname <let>-command\endcsname
1834 \def\HyPsd@LetCommand#1{%
1835   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1836   \expandafter\expandafter\expandafter{%
1837     \expandafter\@gobble\string#1\@empty
1838   }%
1839 }

```

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).

```

1840 \def\HyPsd@ifnextchar#1{%
1841   \pdfstringdefWarn#1%
1842   \expandafter\@gobbletwo\@gobble
1843 }

```

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`.

```

1844 \def\HyPsd@protected@testopt#1{%
1845   \pdfstringdefWarn#1%
1846   \@gobbletwo
1847 }

```

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:

```
1848 \def\HyPsd@Warning#1{%
1849   \begingroup
1850   \let\space\ltx@space
1851   \Hy@Warning{#1}%
1852   \endgroup
1853 }
```

6.6.2 Protecting spaces

```
1854 \RequirePackage{etexcmds}[2007/09/09]
1855 \ifetex@unexpanded
1856   \expandafter\@secondoftwo
1857 \else
1858   \expandafter\@firstoftwo
1859 \fi
1860 {%
```

`\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`.

```
1861 \def\HyPsd@ProtectSpaces#1{%
1862   \iftrue
1863     \expandafter\HyPsd@@ProtectSpacesFi
1864     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1865   \fi
1866 }%
```

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

```
1867 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1868   \fi
1869   \ifx\scrollmode#2\scrollmode
1870     \HyPsd@RemoveMask#1\HyPsd@End#3%
1871   \else
1872     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1873     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1874   \fi
1875 }%
```

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.

```
1876 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1877   \toks@{\expandafter{#1}%
1878   \xdef#2{\the\toks@}%
1879 }%
```

```

1880 }{%
1881   \let\HyPsd@fi\fi
1882   \def\HyPsd@ProtectSpaces#1{%
1883     \xdef#1{%
1884       \iftrue
1885         \expandafter\HyPsd@@ProtectSpacesFi
1886         \expandafter|\expandafter\@empty#1| %
1887       \HyPsd@fi
1888     }%
1889     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1890   }%
1891   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1892     \fi
1893     \etex@unexpanded{#1}%
1894     \ifx\scrollmode#2\scrollmode
1895     \else
1896       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1897     \HyPsd@fi
1898   }%
1899   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1900     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1901   }%
1902 }

```

6.6.3 Remove grouping braces

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

```

1903 \def\HyPsd@RemoveBraces#1{%
1904   \ifx\scrollmode#1\scrollmode
1905   \else
1906     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1907   \fi
1908 }

```

`\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`.

```

1909 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1910   \fi
1911   \def\Hy@temp@A{#1#2}%
1912   \def\Hy@temp@B{#3}%
1913   \ifx\Hy@temp@A\Hy@temp@B
1914     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1915       \HyPsd@String#1%
1916     }%
1917     \ifx\scrollmode#2\scrollmode
1918     \else
1919       \Hy@ReturnAfterFiFiEnd{%

```



```

1920     \HyPsd@RemoveBraces{#2}%
1921   }%
1922   \fi
1923 \else
1924   \def\Hy@temp@A{#1}%
1925   \HyPsd@AppendItalcorr\HyPsd@String
1926   \ifx\Hy@temp@A\@empty
1927     \Hy@ReturnAfterElseFiFiEnd{%
1928       \HyPsd@RemoveBraces{#2}%
1929     }%
1930 \else
1931   \HyPsd@ProtectSpaces\Hy@temp@A
1932   \HyPsd@AppendItalcorr\Hy@temp@A
1933   \Hy@ReturnAfterFiFiEnd{%
1934     \expandafter\HyPsd@RemoveBraces\expandafter
1935       {\Hy@temp@A#2}%
1936   }%
1937   \fi
1938 \fi
1939 \Hy@ReturnEnd
1940 }

```

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

```

1941 \def\HyPsd@AppendItalcorr#1{%
1942   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1%
1943 }
1944 \def\HyPsd@@AppendItalcorr#1#2{%
1945   \expandafter\def\expandafter#2\expandafter{#2#1}%
1946 }

```

6.6.4 Catcode check

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

```

1947 \ltx@ifundefined{directlua}{%
1948 }{%
1949   \expandafter\ifx\csname\endcsname\relax\fi
1950 }

```

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`.

```

1951 \begingroup
1952 \catcode`\Q=\active
1953 \let Q\ltx@empty
1954 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1955 \global\let\HyPsd@Rest\relax
1956 \ifcat\relax\noexpand#1\relax
1957 \ifx#1\protect
1958 \else
1959 \ifx#1\penalty
1960 \setbox\z@=\hbox{%
1961 \afterassignment\HyPsd@AfterCountRemove
1962 \count@=#2\HyPsd@end
1963 }%
1964 \else
1965 \ifx#1\kern
1966 \setbox\z@=\hbox{%
1967 \afterassignment\HyPsd@AfterDimenRemove
1968 \dimen@=#2\HyPsd@end
1969 }%
1970 \else
1971 \ifx#1\hskip
1972 \setbox\z@=\hbox{%
1973 \afterassignment\HyPsd@AfterSkipRemove
1974 \skip@=#2\HyPsd@end
1975 }%
1976 \else
1977 \HyPsd@CatcodeWarning{#1}%
1978 \fi
1979 \fi
1980 \fi
1981 \fi
1982 \else
1983 \ifcat\noexpand#1\noexpandQ% active character
1984 \expandafter\expandafter\expandafter\def
1985 \expandafter\expandafter\expandafter\HyPsd@String
1986 \expandafter\expandafter\expandafter{%
1987 \expandafter\HyPsd@String\string#1%
1988 }%
1989 \else
1990 \ifcat#1A% letter
1991 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1992 \HyPsd@String#1%
1993 }%
1994 \else
1995 \ifcat#1 % SPACE
1996 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1997 \HyPsd@String\HyPsd@SPACEOPTI
1998 }%
1999 \else
2000 \ifcat$#1%
2001 \HyPsd@CatcodeWarning{math shift}%
2002 \else
2003 \ifcat&#1%
2004 \HyPsd@CatcodeWarning{alignment tab}%
2005 \else
2006 \ifcat^#1%
2007 \HyPsd@CatcodeWarning{superscript}%

```

```

2008         \else
2009             \ifcat_#1%
2010                 \HyPsd@CatcodeWarning{subscript}%
2011             \else
2012                 \expandafter\def\expandafter\HyPsd@String\expandafter{%
2013                     \HyPsd@String#1%
2014                 }%
2015             \fi
2016         \fi
2017     \fi
2018 \fi
2019 \fi
2020 \fi
2021 \fi
2022 \fi
2023 \ifx\HyPsd@Rest\relax
2024     \ifx\scrollmode#2\scrollmode
2025     \else
2026         \Hy@ReturnAfterFiFiEnd{%
2027             \HyPsd@CheckCatcodes#2\HyPsd@End
2028         }%
2029     \fi
2030 \else
2031     \ifx\HyPsd@Rest\@empty
2032     \else
2033         \Hy@ReturnAfterFiFiEnd{%
2034             \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2035         }%
2036     \fi
2037 \fi
2038 \Hy@ReturnEnd
2039 }%
2040 \endgroup

```

Remove counts, dimens, skips.

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

```

2041 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2042     \gdef\HyPsd@Rest{#1}%
2043 }

```

`\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.

```

2044 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
2045     \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2046         \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2047         \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2048     \else
2049         \ifdim\dimen@=\z@
2050         \else
2051             \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2052         \fi
2053         \gdef\HyPsd@Rest{#1}%
2054     \fi
2055 }

```

`\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).

```

2056 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
2057   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>\fi>lex %
2058   \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2059   \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2060   \else
2061     \ifdim\skip@=\z@
2062     \else
2063       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2064     \fi
2065     \gdef\HyPsd@Rest{#1}%
2066   \fi
2067 }
```

Catcode warnings.

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

```

2068 \def\HyPsd@CatcodeWarning#1{%
2069   \HyPsd@Warning{%
2070     Token not allowed in a PDF string (%)
2071     \ifHy@unicode
2072       Unicode%
2073     \else
2074       PDFDocEncoding%
2075     \fi
2076   }:%
2077   \MessageBreak removing `~\HyPsd@RemoveCmdPrefix#1'~
2078 }%
2079 }
2080 \begingroup
2081 \catcode`~|=0 %
2082 \catcode`~\=12 %
2083 |gdef|HyPsd@RemoveCmdPrefix#1{%
2084   |expandafter|HyPsd@@RemoveCmdPrefix
2085     |string#1|@empty\<>-|@empty|@empty
2086 }%
2087 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
2088 |endgroup
```

`\HyPsd@RemoveSpaceWarning`

```

2089 \def\HyPsd@RemoveSpaceWarning#1{%
2090   \HyPsd@Warning{%
2091     Token not allowed in a PDF string (%)
2092     \ifHy@unicode
2093       Unicode%
2094     \else
2095       PDFDocEncoding%
2096     \fi
2097   }:%
2098   \MessageBreak #1~\MessageBreak
2099   removed%
2100 }%
2101 }
```

`\HyPsd@ReplaceSpaceWarning`

```

2102 \def\HyPsd@ReplaceSpaceWarning#1{%
2103   \HyPsd@Warning{%
2104     Token not allowed in a PDF string (%
2105     \ifHy@unicode
2106       Unicode%
2107     \else
2108       PDFDocEncoding%
2109     \fi
2110   ):%
2111   \MessageBreak #1\MessageBreak
2112   replaced by space%
2113 }%
2114 }

```

6.6.5 Check for wrong glyphs

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

```

2115 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2116   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2117     \HyPsd@String#1%
2118   }%
2119   \ifx\#2\%
2120   \else
2121     \ltx@ReturnAfterFi{%
2122       \HyPsd@GlyphProcessWarning#2\@empty
2123     }%
2124   \fi
2125 }
2126 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2127   \HyPsd@@@GlyphProcessWarning#1++>%
2128   \HyPsd@GlyphProcess#2\@empty
2129 }
2130 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2131   \ifx\#2\%
2132     \HyPsd@Warning{%
2133       Glyph not defined in %
2134       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2135       removing \@backslashchar#1'%
2136     }%
2137   \else
2138     \HyPsd@Warning{%
2139       Composite letter \@backslashchar#1+#2'\MessageBreak
2140       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2141       \MessageBreak
2142       removing \@backslashchar#1'%
2143     }%
2144   \fi
2145 }

```

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`.

```

2146 \def\HyPsd@spaceopti#1{ % first space
2147 \ifx\HyPsd@spaceopti#1%
2148 \040%
2149 \else
2150 #1%
2151 \fi
2152 }%

```

6.6.6 Replacing tokens

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

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

```

2153 \def\HyPsd@Subst#1#2#3{%
2154 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2155 \fi
2156 ##1%
2157 \ifx\scrollmode##2\scrollmode
2158 \else
2159 #2%
2160 \HyPsd@@ReplaceFi##2\END
2161 \fi
2162 }%
2163 \xdef#3{%
2164 \iftrue
2165 \expandafter\HyPsd@@ReplaceFi#3#1\END
2166 \fi
2167 }%
2168 }

```

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

```

2169 \def\HyPsd@StringSubst#1{%
2170 \expandafter\HyPsd@Subst\expandafter{\string#1}%
2171 }

```

`\HyPsd@EscapeTeX`

```

2172 \begingroup
2173 \lccode`\!=`\%%
2174 \lccode`\|=`\%%
2175 \lccode`\(=\{
2176 \lccode`\)=`\}%
2177 \lccode`0=\ltx@zero
2178 \lccode`1=\ltx@zero
2179 \lccode`3=\ltx@zero
2180 \lccode`4=\ltx@zero
2181 \lccode`5=\ltx@zero
2182 \lccode`7=\ltx@zero
2183 \lowercase{\endgroup
2184 \def\HyPsd@EscapeTeX#1{%
2185 \HyPsd@Subst!{|045}#1%
2186 \HyPsd@Subst({|173}#1%
2187 \HyPsd@Subst){|175}#1%
2188 }%

```

2189 }

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.

```

2190 \def\HyPsd@doxspace#1{%
2191   \ifx#1\relax\else
2192   \ifx#1.\else
2193   \ifx#1:\else
2194   \ifx#1,\else
2195   \ifx#1;\else
2196   \ifx#1!\else
2197   \ifx#1?\else
2198   \ifx#1/\else
2199   \ifx#1-\else
2200   \ifx#1'\else
2201     \HyPsd@SPACEOPTI
2202   \fi
2203   \fi
2204   \fi
2205   \fi
2206   \fi
2207   \fi
2208   \fi
2209   \fi
2210   \fi
2211   \fi
2212   #1%
2213 }%
```

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.

```

2214 \begingroup
2215   \catcode`\|=0 %
2216   \catcode`\=12 %
```

`\HyPsd@ConvertToUnicode`

```

2217 |gdef\HyPsd@ConvertToUnicode#1{%
2218   |xdef#1{%
2219     |expandafter\HyPsd@DoConvert#1|@empty|@empty|@empty
2220   }%
2221   |ifx#1|@empty
2222   |else
2223     |xdef#1{%
2224       \376\377%
2225       #1%
2226     }%
2227   |fi
2228 }%
```

\HyPsd@DoConvert

```

2229 |gdef|HyPsd@DoConvert#1{%
2230 |ifx#1|@empty
2231 |else
2232 |ltx@ReturnAfterFi{%
2233 |ifx#1\%%
2234 \%%
2235 |expandafter|HyPsd@DoEscape
2236 |else
2237 |HyPsd@Char{#1}%
2238 |expandafter|HyPsd@DoConvert
2239 |fi
2240 }%
2241 |fi
2242 }%

```

\HyPsd@DoEscape

```

2243 |gdef|HyPsd@DoEscape#1{%
2244 |ifx#19%
2245 |expandafter|HyPsd@GetTwoBytes
2246 |else
2247 |ltx@ReturnAfterFi{%
2248 |ifx#18%
2249 00%
2250 |expandafter|HyPsd@GetTwoBytes
2251 |else
2252 #1%
2253 |expandafter|HyPsd@GetOneByte
2254 |fi
2255 }%
2256 |fi
2257 }%

```

\HyPsd@GetTwoBytes

```

2258 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2259 #1\#2#3#4%
2260 |HyPsd@DoConvert
2261 }%

```

\HyPsd@GetOneByte

```

2262 |gdef|HyPsd@GetOneByte#1#2{%
2263 #1#2%
2264 |HyPsd@DoConvert
2265 }%
2266 |endgroup

```

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

```

2267 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2268 \xdef#4{#4#1#2}%
2269 \HyPsd@@ConvertToUnicode#3\END#4%
2270 }

```

\HyPsd@Char

```

2271 \begingroup
2272 \catcode0=9 %
2273 \catcode`\^=7 %

```



```

2274 \catcode\^^^=12 %
2275 \def\x{^^^^0000}%
2276 \expandafter\endgroup
2277 \ifx\x\@empty
2278 \def\HyPsd@Char#1{%
2279 \ifnum`#1<128 %
2280 \@backslashchar 000#1%
2281 \else
2282 \ifnum`#1<65536 %
2283 \expandafter\HyPsd@CharTwoByte\number`#1!%
2284 \else
2285 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2286 \intcalcSub{`#1}{65536}!%
2287 \fi
2288 \fi
2289 }%
2290 \def\HyPsd@CharTwoByte#1!{%
2291 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2292 \IntCalcDiv#1!256!!%
2293 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2294 \IntCalcMod#1!256!!%
2295 }%
2296 \def\HyPsd@CharOctByte#1!{%
2297 \@backslashchar
2298 \IntCalcDiv#1!64!%
2299 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2300 \IntCalcMod#1!8!%
2301 }%
2302 \def\HyPsd@CharSurrogate#1!{%
2303 \@backslashchar 33%
2304 \IntCalcDiv#1!262144!%
2305 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2306 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2307 \@backslashchar 33%
2308 \expandafter\expandafter\expandafter\IntCalcAdd
2309 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2310 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2311 \IntCalcMod#1!256!!%
2312 }%
2313 \else
2314 \def\HyPsd@Char#1{%
2315 \@backslashchar 000#1%
2316 }%
2317 \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

```

```

2318 \begingroup\expandafter\expandafter\expandafter\endgroup
2319 \expandafter\ifx\csname numexpr\endcsname\relax
2320 \let\HyPsd@UTFviii\relax
2321 \else
2322 \begingroup
2323 \lccode\~=`^^f4\relax
2324 \lowercase{\endgroup
2325 \def\HyPsd@UTFviii{%
2326 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2327 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2328 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2329 \ifx~\HyPsd@UTFviii@ccxliv@undef
2330 \let~\HyPsd@UTFviii@ccxliv@def
2331 \fi
2332 \let\unichar\HyPsd@unichar
2333 }%
2334 }%
2335 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2336 \edef\HyPsd@UTFviii@ccxliv@def{%
2337 \noexpand\UTFviii@four@octets\string ^^f4%
2338 }%

```

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

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

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

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

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

$$(5)$$

```

2339 \def\HyPsd@UTFviii@two#1#2{%
2340 \expandafter\HyPsd@UTFviii@@two
2341 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
2342 \number`#1\expandafter|
2343 \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter|
2344 \number`#2 \@nil
2345 }%
2346 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2347 \expandafter\8%
2348 \number\dimexpr #1-48\expandafter\relax
2349 \csname\number\dimexpr #2-4*#1\relax\expandafter\endcsname
2350 \number\dimexpr #3-8*%
2351 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2352 \number\dimexpr #4-8*#3\relax
2353 }%

```

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

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

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

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

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

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

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

(12)

```

2354 \def\HyPsd@UTFviii@three#1#2#3{%
2355   \expandafter\HyPsd@UTFviii@@three
2356   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
2357   \number`#1\expandafter| %
2358   \number\ifnum\dimexpr`#2-128\relax <32 0\else 1\fi\expandafter| %
2359   \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter| %
2360   \number`#2\expandafter| %
2361   \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter| %
2362   \number`#3 \@nil
2363 }%
2364 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2365   \expandafter\%
2366   \number\dimexpr #1-56\expandafter\relax
2367   \number\dimexpr 2*(#2-4*#1)+#3\expandafter\relax
2368   \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2369   \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
2370   \number\dimexpr #6-16\expandafter\relax
2371   \number\dimexpr #7-8*#6\relax
2372 }%

```

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

```

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

```

```

2373 \def\HyPsd@UTFviii@four#1#2{%
2374   \expandafter\HyPsd@@UTFviii@four\number
2375   \dimexpr-1+(\`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2376   \expandafter|\number
2377   \dimexpr`#2-16*\dimexpr.0625\dimexpr`#2sp| %
2378 }%
2379 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2380   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2381   \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2382   \ifodd#2 %
2383     \number\dimexpr(#2-1)/2\relax
2384   \else
2385     \number\dimexpr#2/2\relax
2386   \fi
2387   \number\dimexpr\ifodd#2 4+\fi
2388   \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
2389   \933%
2390   \expandafter\HyPsd@@@UTFviii@four\number
2391   \dimexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
2392 }%
2393 \def\HyPsd@@@UTFviii@four#1|#2{%
2394   \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2395   \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2396   \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
2397   \number\dimexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
2398 }%

```

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

```

2399 \def\HyPsd@unichar#1{%
2400 \ifHy@unicode
2401 \ifnum#1>"10FFFF %
2402 \HyPsd@UnicodeReplacementCharacter % illegal
2403 \else
2404 \ifnum#1>"FFFF %

```

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

```

2405 \expandafter\HyPsd@unichar\expandafter{%
2406 \number\dimexpr 55296+%
2407 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2408 \relax\relax\relax
2409 }%

```

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

```

2410 \expandafter\HyPsd@unichar\expandafter{%
2411 \number\dimexpr#1-9216%
2412 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2413 \relax\relax\relax
2414 }%
2415 \else
2416 \ifnum#1>"7FF %
2417 \9%
2418 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2419 \number
2420 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2421 }%
2422 \else
2423 \8%
2424 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2425 \fi
2426 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2427 \number
2428 \numexpr#1-256*\number
2429 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2430 }%
2431 \fi
2432 \fi
2433 \else
2434 .% unsupported (Unicode -> PDF Doc Encoding)
2435 \fi
2436 }%
2437 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2438 \def\HyPsd@unichar@first@byte#1{%
2439 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2440 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2441 \number
2442 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2443 \relax\relax\relax
2444 }%
2445 }%
2446 \def\HyPsd@unichar@second@byte#1{%
2447 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2448 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2449 \number
2450 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%

```

```

2451 \relax\relax\relax
2452 }%
2453 }%
2454 \def\HyPsd@unichar@octtwo#1{%
2455 \number\dimexpr.125\dimexpr#1sp\relax\relax
2456 \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2457 \relax\relax\relax
2458 }%
2459 \fi

```

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

```

2460 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2461 \ifx\@gobble#1%
2462 \else
2463 [Please insert \textbackslash PrerenderUnicode%
2464 \textbraceleft#1\textbraceright\space
2465 into preamble]%
2466 \fi
2467 }%

```

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`.

```

2468 \def\HyPsd@DieFace#1{%
2469 \ifHy@unicode
2470 \ifnum#1<1 %
2471 \HyPsd@UnicodeReplacementCharacter
2472 \else
2473 \ifnum#1>6 %
2474 \9046\205%
2475 \expandafter\expandafter\expandafter
2476 \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2477 \else
2478 \9046\20\intcalcDec{#1}%
2479 \fi
2480 \fi
2481 \else
2482 .% Die faces are not part of PDFDocEncoding
2483 \fi
2484 }

```

`\HyPsd@DieFaceLarge`

```

2485 \def\HyPsd@DieFaceLarge#1{%
2486 \ifnum#1>6 %
2487 \expandafter\ltx@firstoftwo
2488 \else
2489 \expandafter\ltx@secondoftwo

```

```

2490 \fi
2491 {%
2492 \9046\205%
2493 \expandafter\expandafter\expandafter
2494 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2495 }{%
2496 \9046\20\IntCalcDec#1!%
2497 }%
2498 }

```

6.6.11 Support for moon phases of package china2e

```

2499 \def\HyPsd@MoonPha#1{%
2500 \ifcase\intcalcNum{#1} %
2501 \HyPsd@UnicodeReplacementCharacter
2502 \or % 1
2503 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2504 \9330\074\9337\032%
2505 \or % 2
2506 \HyPsd@UnicodeReplacementCharacter
2507 \or % 3
2508 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2509 \9330\074\9337\035%
2510 \or % 4
2511 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2512 \9330\074\9337\034%
2513 \else
2514 \HyPsd@UnicodeReplacementCharacter
2515 \fi
2516 }
2517 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2518 \def\HyPsd@ding#1{%
2519 \ifHy@unicode
2520 \ifnum#1<32 %
2521 \HyPsd@UnicodeReplacementCharacter
2522 \else
2523 \ifnum#1>254 %
2524 \HyPsd@UnicodeReplacementCharacter
2525 \else
2526 \ifnum#1<127 %
2527 \expandafter\expandafter\expandafter
2528 \HyPsd@@ding\intcalcNum{#1}!%
2529 \else
2530 \ifnum#1>160 %
2531 \expandafter\expandafter\expandafter
2532 \HyPsd@@ding\intcalcNum{#1}!%
2533 \else
2534 \HyPsd@UnicodeReplacementCharacter
2535 \fi
2536 \fi
2537 \fi
2538 \fi
2539 \else
2540 .% Dingbats are not part of PDFDocEncoding

```

```

2541 \fi
2542 }

\HyPsd@@ding
2543 \def\HyPsd@@ding#1!{%
2544 \ltx@ifundefined{HyPsd@ding@#1}{%
2545 \ifnum#1<127 %
2546 \9047%
2547 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2548 \else
2549 \ifnum#1<168 %
2550 \9047\14\IntCalcSub#1!160!%
2551 \else
2552 \ifnum#1>181 %
2553 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2554 \else
2555 % 172..181 -> U+2460..U+2469
2556 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2557 \fi
2558 \fi
2559 \fi
2560 }{%
2561 \csname HyPsd@ding@#1\endcsname
2562 }%
2563 }

2564 \@namedef{HyPsd@ding@32}{\space}
2565 % U+260E BLACK TELEPHONE
2566 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2567 % U+261B BLACK RIGHT POINTING INDEX
2568 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2569 % U+261E WHITE RIGHT POINTING INDEX
2570 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2571 % U+2605 BLACK STAR
2572 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2573 % U+25CF BLACK CIRCLE
2574 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2575 % U+25A0 BLACK SQUARE
2576 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2577 % U+25B2 BLACK UP-POINTING TRIANGLE
2578 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2579 % U+25BC BLACK DOWN-POINTING TRIANGLE
2580 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2581 % U+25C6 BLACK DIAMOND
2582 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2583 % U+25D7 RIGHT HALF BLACK CIRCLE
2584 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2585 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2586 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2587 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2588 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2589 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2590 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2591 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2592 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```
2593 \@ifclassloaded{memoir}{%
2594   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}}%
2595 }
```

7.2 Package subfigure

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

```
2596 \@ifpackageloaded{subfigure}{%
2597   \ltx@ifundefined{sub@label}{%
2598     \Hy@hypertexnamesfalse
2599   }{%
2600     \renewcommand*{\sub@label}[1]{%
2601       \bsphack
2602       \subfig@oldlabel{#1}%
2603       \if@filesw
2604         \begingroup
2605           \edef\@currentlabstr{%
2606             \expandafter\strip@prefix\meaning\@currentlabelname
2607           }%
2608           \protected@write\@auxout{}{%
2609             \string\newlabel{sub@#1}{%
2610               {\@nameuse{\@thesub\@capttype}}%
2611               {\thepage}%
2612             }%
2613             \expandafter\strip@period\@currentlabstr
2614             \relax.\relax\@@@%
2615           }%
2616           {\@currentHref}%
2617           {}%
2618         }%
2619       }%
2620     \endgroup
2621   \fi
2622   \@esphack
2623 }%
2624 \@ifpackagelater{subfigure}{2002/03/26}{%
2625   \providecommand*{\toclevel@subfigure}{1}%
2626   \providecommand*{\toclevel@subtable}{1}%
2627 }%
2628 }%
2629 }
```

7.3 Package xr and xr-hyper

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

```
2630 \ltx@ifundefined{XR@addURL}{%
2631 }
```

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.

```
2632 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2633 \def\xr@dURL#1#2#3#4#5\\{%
2634   {#1}{#2}%
2635 }
```



```

2635 \if!#4!%
2636 \else
2637   {#3}{#4}{\XR@URL}%
2638 \fi
2639 }%
2640 }

2641 \def\Hy@true{true}
2642 \def\Hy@false{false}

```

Providing dummy definitions.

```

2643 \let\literalps@out\@gobble
2644 \newcommand\pdfbookmark[3][]{ }
2645 \def\Acrobatmenu#1#2{\leavevmode#2}
2646 \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

```

2647 \let\HyperRaiseLinkHook\@empty
2648 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

2649 \newcount\Hy@SavedSpaceFactor
2650 \def\Hy@SaveSpaceFactor{%
2651   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@ \fi
2652 }
2653 \def\Hy@RestoreSpaceFactor{%
2654   \relax
2655   \ifhmode
2656     \ifnum\Hy@SavedSpaceFactor>\z@
2657       \spacefactor=\Hy@SavedSpaceFactor
2658     \fi
2659   \fi
2660 }
2661 \def\Hy@SaveSavedSpaceFactor{%
2662   \edef\Hy@RestoreSavedSpaceFactor{%
2663     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2664   }%
2665 }
2666 \def\Hy@raisedlink#1{%
2667   \ifvmode
2668     #1%
2669   \else
2670     \Hy@SaveSpaceFactor
2671     \penalty\@M

```

```

2672 \smash{%
2673 \begingroup
2674 \let\HyperRaiseLinkLength\@tempdima
2675 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2676 \HyperRaiseLinkHook
2677 \expandafter\endgroup
2678 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2679 \Hy@RestoreSpaceFactor
2680 #1%
2681 \Hy@SaveSpaceFactor
2682 }%
2683 }%
2684 \Hy@RestoreSpaceFactor
2685 \fi
2686 }

```

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

```

2687 \def\Hy@SaveLastskip{%
2688 \let\Hy@RestoreLastskip\relax
2689 \ifvmode
2690 \ifdim\lastskip=\z@
2691 \let\Hy@RestoreLastskip\nobreak
2692 \else
2693 \begingroup
2694 \skip@=-\lastskip
2695 \edef\x{%
2696 \endgroup
2697 \def\noexpand\Hy@RestoreLastskip{%
2698 \noexpand\ifvmode
2699 \noexpand\nobreak
2700 \vskip\the\skip@
2701 \vskip\the\lastskip\relax
2702 \noexpand\fi
2703 }%
2704 }%
2705 \x
2706 \fi
2707 \else
2708 \ifhmode
2709 \ifdim\lastskip=\z@
2710 \let\Hy@RestoreLastskip\nobreak
2711 \else
2712 \begingroup
2713 \skip@=-\lastskip
2714 \edef\x{%
2715 \endgroup
2716 \def\noexpand\Hy@RestoreLastskip{%
2717 \noexpand\ifhmode
2718 \noexpand\nobreak
2719 \hskip\the\skip@
2720 \hskip\the\lastskip\relax
2721 \noexpand\fi
2722 }%
2723 }%
2724 \x
2725 \fi
2726 \fi

```

```

2727 \fi
2728 }%

```

9 Options

```

2729 \SetupKeyvalOptions{%
2730   family=Hyp,%
2731   prefix=HyOpt%
2732 }

```

9.1 Help macros

\IfHyperBooleanExists

```

2733 \def\IfHyperBooleanExists#1{%
2734   \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2735     \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2736   }%
2737 }

2738 \@namedef{KV@Hyp@stoppeearly@default}{ }

```

\IfHyperBoolean

```

2739 \def\IfHyperBoolean#1{%
2740   \IfHyperBooleanExists{#1}{%
2741     \csname ifHy@#1\endcsname
2742     \expandafter\ltx@firstoftwo
2743   \else
2744     \expandafter\ltx@secondoftwo
2745   \fi
2746 } \ltx@secondoftwo
2747 }

```

\Hy@boolkey

```

2748 \def\Hy@boolkey#1#2{%
2749   \edef\Hy@tempa{#2}%
2750   \lowercase\expandafter{%
2751     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2752   }%
2753   \ifx\Hy@tempa\@empty
2754     \let\Hy@tempa\Hy@true
2755   \fi
2756   \ifx\Hy@tempa\Hy@true
2757   \else
2758     \ifx\Hy@tempa\Hy@false
2759     \else
2760       \let\Hy@tempa\relax
2761     \fi
2762   \fi
2763   \ifx\Hy@tempa\relax
2764     \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2765   \else
2766     \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2767     \csname Hy@#1\Hy@tempa\endcsname
2768   \fi
2769 }

```

\Hy@WarnOptionValue

```
2770 \def\Hy@WarnOptionValue#1#2#3{%
2771   \Hy@Warning{%
2772     Unexpected value `#1'\MessageBreak
2773     of option `#2' instead of\MessageBreak
2774     #3%
2775   }%
2776 }
```

\Hy@DisableOption

```
2777 \def\Hy@DisableOption#1{%
2778   \ltx@ifundefined{KV@Hyp@#1@default}{%
2779     \define@key{Hyp}{#1}%
2780   }{%
2781     \define@key{Hyp}{#1}[]%
2782   }%
2783   {\Hy@WarnOptionDisabled{#1}}%
2784 }
2785
```

\Hy@WarnOptionDisabled

```
2786 \def\Hy@WarnOptionDisabled#1{%
2787   \Hy@Warning{%
2788     Option `#1' has already been used,\MessageBreak
2789     setting the option has no effect%
2790   }%
2791 }
```

\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.

```
2792 \def\Hy@CheckOptionValue#1#2#3{%
2793   \begingroup
2794   \edef\x{#1}%
2795   \@onelevel@sanitize\x
2796   \let\y=y%
2797   \def\do##1##2{%
2798     \def\z{##1}%
2799     \@onelevel@sanitize\z
2800     \ifx\x\z
2801       \let\y=n%
2802     \let\do\@gobbletwo
2803   \fi
2804   }%
2805   #3%
2806   \ifx\y y%
2807     \def\do##1##2{%
2808       * `##1'%
2809       \ifx\\##2\\\else\space(##2)\fi
2810       \MessageBreak
2811     }%
2812     \Hy@Warning{%
2813       Values of option `#2':\MessageBreak
2814       #3%
2815       * An empty value disables the option.\MessageBreak
2816       Unknown value `x'%
2817     }%
2818   }
```

```

2818   \fi
2819 \endgroup
2820 }

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument
is a comment.
2821 \def\Hy@DefNameKey#1{%
2822   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2823 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
2824 \def\Hy@@DefNameKey#1#2#3{%
2825   \define@key{Hyp}{#2}{%
2826     \edef#1{##1}%
2827     \ifx#1\@empty
2828     \else
2829       \Hy@CheckOptionValue{##1}{#2}{#3}%
2830     \fi
2831   }%
2832   \let#1\@empty
2833 }

\Hy@UseNameKey
2834 \def\Hy@UseNameKey#1#2{%
2835   \ifx#2\@empty
2836   \else
2837     /#1/#2%
2838   \fi
2839 }

```

9.2 Defining the options

```

2840 \define@key{Hyp}{implicit}[true]{%
2841   \Hy@boolkey{implicit}{#1}%
2842 }
2843 \define@key{Hyp}{draft}[true]{%
2844   \Hy@boolkey{draft}{#1}%
2845 }
2846 \define@key{Hyp}{final}[true]{%
2847   \Hy@boolkey{final}{#1}%
2848 }
2849 \let\KV@Hyp@nolinks\KV@Hyp@draft
2850 \def\Hy@ObsoletePaperOption#1{%
2851   \Hy@WarningNoLine{%
2852     Option `#1' is no longer used%
2853   }%
2854   \define@key{Hyp}{#1}[true]{}%
2855 }
2856 \def\Hy@temp#1{%
2857   \define@key{Hyp}{#1}[true]{%
2858     \Hy@ObsoletePaperOption{#1}%
2859   }%
2860 }

```

```

2861 \Hy@temp{a4paper}
2862 \Hy@temp{a5paper}
2863 \Hy@temp{b5paper}
2864 \Hy@temp{letterpaper}
2865 \Hy@temp{legalpaper}
2866 \Hy@temp{executivepaper}

2867 \define@key{Hyp}{setpagesize}[true]{%
2868   \Hy@boolkey{setpagesize}{#1}%
2869 }
2870 \define@key{Hyp}{debug}[true]{%
2871   \Hy@boolkey{debug}{#1}%
2872 }
2873 \define@key{Hyp}{linktocpage}[true]{%
2874   \Hy@boolkey{linktocpage}{#1}%
2875   \ifHy@linktocpage
2876     \let\Hy@linktoc\Hy@linktoc@page
2877   \else
2878     \let\Hy@linktoc\Hy@linktoc@section
2879   \fi
2880 }
2881 \chardef\Hy@linktoc@none=0 %
2882 \chardef\Hy@linktoc@section=1 %
2883 \chardef\Hy@linktoc@page=2 %
2884 \chardef\Hy@linktoc@all=3 %
2885 \ifHy@linktocpage
2886   \let\Hy@linktoc\Hy@linktoc@page
2887 \else
2888   \let\Hy@linktoc\Hy@linktoc@section
2889 \fi
2890 \define@key{Hyp}{linktoc}{%
2891   \@ifundefined{Hy@linktoc@#1}{%
2892     \Hy@Warning{%
2893       Unexpected value `#1' of\MessageBreak
2894       option `linktoc' instead of `none',\MessageBreak
2895       `section', `page' or `all'%
2896     }%
2897   }{%
2898     \expandafter\let\expandafter\Hy@linktoc
2899     \csname Hy@linktoc@#1\endcsname
2900   }%
2901 }
2902 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2903 \let\XR@ext\relax
2904 \define@key{Hyp}{verbose}[true]{%
2905   \Hy@boolkey{verbose}{#1}%
2906 }
2907 \define@key{Hyp}{typexml}[true]{%
2908   \Hy@boolkey{typexml}{#1}%
2909 }

```

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.

```

2910 \define@key{Hyp}{raiselinks}[true]{%
2911   \Hy@boolkey{raiselinks}{#1}%
2912 }

```

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

```

2913 \def\Hy@setbreaklinks#1{%
2914   \csname breaklinks#1\endcsname
2915 }
2916 \def\Hy@breaklinks@unsupported{%
2917   \ifx\Hy@setbreaklinks\@gobble
2918     \ifHy@breaklinks
2919       \Hy@WarningNoLine{%
2920         You have enabled option `breaklinks'.\MessageBreak
2921         But driver ``\Hy@driver.def' does not support this.\MessageBreak
2922         Expect trouble with the link areas of broken links%
2923       }%
2924     \fi
2925   \fi
2926 }
2927 \define@key{Hyp}{breaklinks}[true]{%
2928   \Hy@boolkey{breaklinks}{#1}%
2929   \let\Hy@setbreaklinks\@gobble
2930 }
2931 \define@key{Hyp}{localanchorname}[true]{%
2932   \Hy@boolkey{localanchorname}{#1}%
2933 }

```

Determines whether an automatic anchor is put on each page

```

2934 \define@key{Hyp}{pageanchor}[true]{%
2935   \Hy@boolkey{pageanchor}{#1}%
2936 }

```

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.

```

2937 \define@key{Hyp}{plainpages}[true]{%
2938   \Hy@boolkey{plainpages}{#1}%
2939 }

```

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

```

2940 \define@key{Hyp}{naturalnames}[true]{%
2941   \Hy@boolkey{naturalnames}{#1}%
2942 }

```

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

```

2943 \define@key{Hyp}{hypertexnames}[true]{%
2944   \Hy@boolkey{hypertexnames}{#1}%
2945 }

```

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

```

2946 \define@key{Hyp}{nesting}[true]{%
2947   \Hy@boolkey{nesting}{#1}%
2948 }
2949 \define@key{Hyp}{destlabel}[true]{%
2950   \Hy@boolkey{destlabel}{#1}%
2951 }

```

```

2952 \define@key{Hyp}{unicode}[true]{%
2953   \Hy@boolkey{unicode}{#1}%
2954   \ifHy@unicode
2955     \def\HyPsd@pdfencoding{unicode}%

```

```

2956 \HyPsd@LoadUnicode
2957 \else
2958 \def\HyPsd@pdfencoding{pdfdoc}%
2959 \fi
2960 }
2961 \Hy@AtBeginDocument{%
2962 \ifx\HyPsd@LoadUnicode\relax
2963 \else
2964 \def\HyPsd@LoadUnicode{%
2965 \Hy@Error{%
2966 Unicode support for bookmarks is not available.\MessageBreak
2967 Activate unicode support by using one of the options\MessageBreak
2968 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2969 in the preamble%
2970 } \@ehc
2971 \global\let\HyPsd@LoadUnicode\relax
2972 \global\Hy@unicodedefalse
2973 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2974 }%
2975 \fi
2976 }

2977 \define@key{Hyp}{pdfencoding}{%
2978 \edef\HyPsd@temp{#1}%
2979 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2980 \let\HyPsd@pdfencoding\HyPsd@temp
2981 \Hy@unicodedefalse
2982 \else
2983 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2984 \z@
2985 \else
2986 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2987 \z@
2988 \else
2989 \@ne
2990 \fi
2991 \fi
2992 \let\HyPsd@pdfencoding\HyPsd@temp
2993 \hypersetup{unicode}%
2994 \ifHy@unicode
2995 \def\HyPsd@pdfencoding{#1}%
2996 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2997 \HyPsd@LoadStringEncoding
2998 \fi
2999 \else
3000 \Hy@Warning{Cannot switch to unicode bookmarks}%
3001 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3002 \fi
3003 \else
3004 \@onelevel@sanitize\HyPsd@temp
3005 \Hy@Warning{%
3006 Values of option `pdfencoding':\MessageBreak
3007 `pdfdoc', `unicode', `auto'.\MessageBreak
3008 Ignoring unknown value ``\HyPsd@temp'%
3009 }%
3010 \fi
3011 \fi
3012 }

```



```

3013 \def\HyPsd@pdfencoding@auto{auto}
3014 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3015 \def\HyPsd@pdfencoding@unicode{unicode}
3016 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
3017 \def\HyPsd@LoadStringEnc{%
3018   \RequirePackage{stringenc}[2009/12/15]%
3019   \let\HyPsd@LoadStringEnc\relax
3020 }
3021 \Hy@AtBeginDocument{%
3022   \ifpackageloaded{stringenc}{%
3023     \let\HyPsd@LoadStringEnc\relax
3024   }{%
3025     \def\HyPsd@LoadStringEnc{%
3026       \Hy@WarningNoLine{%
3027         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
3028         in the preamble or load the package there%
3029       }%
3030     }%
3031   }%
3032 }

3033 \define@key{Hyp}{psdextra}[true]{%
3034   \Hy@boolkey{psdextra}{#1}%
3035   \HyPsd@LoadExtra
3036 }

3037 \def\hypersetup{\kvsetkeys{Hyp}}

3038 \newif\ifHy@setpdfversion
3039 \define@key{Hyp}{pdfversion}{%
3040   \ifundefined{Hy@pdfversion@#1}{%
3041     \PackageWarning{hyperref}{%
3042       Unsupported PDF version `#1'.\MessageBreak
3043       Valid values: 1.2-1.7, 2.0%
3044     }%
3045   }{%
3046     \Hy@setpdfversiontrue
3047     \@nameuse{Hy@pdfversion@#1}%
3048   }%
3049 }

\Hy@pdfminorversion already used elsewhere to denote \pdfminorversion or
\pdfvariable majorversion} so introduce new names here.
3050 \@namedef{Hy@pdfversion@1.2}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{2}}%
3051 \@namedef{Hy@pdfversion@1.3}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{3}}%
3052 \@namedef{Hy@pdfversion@1.4}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{4}}%
3053 \@namedef{Hy@pdfversion@1.5}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{5}}%
3054 \@namedef{Hy@pdfversion@1.6}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{6}}%
3055 \@namedef{Hy@pdfversion@1.7}{\def\Hy@pdf@majorversion{1}\def\Hy@pdf@mi-
norversion{7}}%
3056 \@namedef{Hy@pdfversion@2.0}{\def\Hy@pdf@majorversion{2}\def\Hy@pdf@mi-
norversion{0}}%
3057 \def\Hy@pdf@majorversion{1}\def\Hy@pdf@minorversion{5}

```

Legacy name, earlier releases assumed 1.x

```

3058 \let\Hy@pdfversion\Hy@pdf@minorversion
3059 \def\Hy@pdf@majorminor@version{\numexpr100*\Hy@pdf@majorversion+\Hy@pdf@mi-
    norversion\relax}
3060 \def\Hy@pdfmajorminor@version{\numexpr100*\Hy@pdfmajorversion+\Hy@pdfmi-
    norversion\relax}
if pdfminorversion is defined, make sure pdfmajorversion is too.
3061 \@ifundefined{pdfminorversion}{-}{%
3062 \@ifundefined{pdfmajorversion}{-}{%
3063 \newcount\pdfmajorversion
3064 \pdfmajorversion=1
3065 }-}%
3066 }
3067 \ifx\pdfmajorversion\undefined\else
3068 \def\Hy@pdfmajorversion{\pdfmajorversion}
3069 \fi

```

10 Options for different drivers

```

3070 \newif\ifHy@DviMode
3071 \let\Hy@DviErrMsg\ltx@empty
3072 \ifpdf
3073 \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3074 \else
3075 \ifxetex
3076 \def\Hy@DviErrMsg{XeTeX is running}%
3077 \else
3078 \ifvtex
3079 \ifnum\OpMode=\z@
3080 \Hy@DviModetrue
3081 \else
3082 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3083 \fi
3084 \else
3085 \Hy@DviModetrue
3086 \fi
3087 \fi
3088 \fi
3089 \def\HyOpt@CheckDvi#1{%
3090 \ifHy@DviMode
3091 \expandafter\ltx@firstofone
3092 \else
3093 \Hy@Error{%
3094 Wrong DVI mode driver option `#1',\MessageBreak
3095 because \Hy@DviErrMsg
3096 } \@ehc
3097 \expandafter\ltx@gobble
3098 \fi
3099 }

3100 \DeclareVoidOption{tex4ht}{%
3101 \Hy@texhttrue
3102 \kvsetkeys{Hyp}{colorlinks=true}%
3103 \def\BeforeTeXIVht{\RequirePackage{color}}}%
3104 \def\Hy@driver{htex4ht}%
3105 \def\MaybeStopEarly{%
3106 \Hy@Message{Stopped early}%
3107 \Hy@AtBeginDocument{%
3108 \PDF@FinishDoc

```

```

3109 \gdef\PDF@FinishDoc{%
3110 }%
3111 \endinput
3112 }%
3113 }
3114 \DeclareVoidOption{pdftex}{%
3115 \ifpdf
3116 \def\Hy@driver{hpdftex}%
3117 \PassOptionsToPackage{pdftex}{color}%
3118 \else
3119 \Hy@Error{%
3120 Wrong driver option `pdftex',\MessageBreak
3121 because pdfTeX in PDF mode is not detected%
3122 }\@ehc
3123 \fi
3124 }
3125 \DeclareVoidOption{luatex}{%
3126 \ifpdf
3127 \ifx\pdfextension\@undefined
3128 \def\Hy@driver{hpdftex}%
3129 \PassOptionsToPackage{pdftex}{color}%
3130 \else
3131 \def\Hy@driver{hluatex}%
3132 \PassOptionsToPackage{luatex}{color}%
3133 \fi
3134 \else
3135 \Hy@Error{%
3136 Wrong driver option `luatex',\MessageBreak
3137 because luaTeX in PDF mode is not detected%
3138 }\@ehc
3139 \fi
3140 }
3141 \DeclareVoidOption{nativepdf}{%
3142 \HyOpt@CheckDvi{nativepdf}{%
3143 \def\Hy@driver{hdvips}%
3144 \PassOptionsToPackage{dvips}{color}%
3145 }%
3146 }
3147 \DeclareVoidOption{dvipdfm}{%
3148 \HyOpt@CheckDvi{dvipdfm}{%
3149 \def\Hy@driver{hdvipdfm}%
3150 }%
3151 }
3152 \DeclareVoidOption{dvipdfmx}{%
3153 \HyOpt@CheckDvi{dvipdfmx}{%
3154 \def\Hy@driver{hdvipdfm}%
3155 \PassOptionsToPackage{dvipdfmx}{color}%
3156 }%
3157 }
3158 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3159 \expandafter\ifx\csname if#1\expandafter\endcsname
3160 \csname iftrue\endcsname
3161 \chardef\SpecialDvipdfmxOutlineOpen\@ne
3162 \else
3163 \chardef\SpecialDvipdfmxOutlineOpen\z@
3164 \fi
3165 }

```

```

3166 \DeclareVoidOption{xetex}{%
3167   \ifxetex
3168     \def\Hy@driver{hxtex}%
3169   \else
3170     \Hy@Error{%
3171       Wrong driver option `xetex',\MessageBreak
3172       because XeTeX is not detected%
3173     }\@ehc
3174   \fi
3175 }
3176 \DeclareVoidOption{pdfmark}{%
3177   \HyOpt@CheckDvi{pdfmark}{%
3178     \def\Hy@driver{hdvips}%
3179   }%
3180 }
3181 \DeclareVoidOption{dvips}{%
3182   \HyOpt@CheckDvi{dvips}{%
3183     \def\Hy@driver{hdvips}%
3184     \PassOptionsToPackage{dvips}{color}%
3185   }%
3186 }
3187 \DeclareVoidOption{hypertex}{%
3188   \HyOpt@CheckDvi{hypertex}{%
3189     \def\Hy@driver{hypertex}%
3190   }%
3191 }
3192 \let\Hy@MaybeStopNow\relax
3193 \DeclareVoidOption{vtex}{%
3194   \ifvtex
3195     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3196     \def\Hy@driver{hvtex}%
3197   \else
3198     \ifnum\OpMode=10\relax
3199     \def\Hy@driver{hvtexhtm}%
3200     \def\MaybeStopEarly{%
3201       \Hy@Message{Stopped early}%
3202       \Hy@AtBeginDocument{%
3203         \PDF@FinishDoc
3204         \gdef\PDF@FinishDoc{}%
3205       }%
3206     \endinput
3207   }%
3208   \else
3209     \Hy@Error{%
3210       Wrong driver option `vtex',\MessageBreak
3211       because of wrong OpMode (\the\OpMode)%
3212     }\@ehc
3213   \fi
3214 }
3215 \else
3216   \Hy@Error{%
3217     Wrong driver option `vtex',\MessageBreak
3218     because VTeX is not running%
3219   }\@ehc
3220 }
3221 }
3222 \DeclareVoidOption{vtexpdfmark}{%

```

```

3223 \ifvtex
3224   \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3225   \def\Hy@driver{hvtexmrk}%
3226   \else
3227     \Hy@Error{%
3228       Wrong driver option `vtexpdfmark',\MessageBreak
3229       because of wrong OpMode (\the\OpMode)%
3230     }\@ehc
3231   \fi
3232 \else
3233   \Hy@Error{%
3234     Wrong driver option `vtexpdfmark',\MessageBreak
3235     because VTeX is not running%
3236   }\@ehc
3237 \fi
3238 }
3239 \DeclareVoidOption{dviwindo}{}%
3240 \HyOpt@CheckDvi{dviwindo}{}%
3241 \def\Hy@driver{hdviwind}%
3242 \kvsetkeys{Hyp}{colorlinks}%
3243 \PassOptionsToPackage{dviwindo}{color}%
3244 }%
3245 }
3246 \DeclareVoidOption{dvipsone}{}%
3247 \HyOpt@CheckDvi{dvipsone}{}%
3248 \def\Hy@driver{hdvipson}%
3249 \PassOptionsToPackage{dvipsone}{color}%
3250 }%
3251 }
3252 \DeclareVoidOption{textures}{}%
3253 \HyOpt@CheckDvi{textures}{}%
3254 \def\Hy@driver{htexture}%
3255 }%
3256 }
3257 \DeclareVoidOption{latex2html}{}%
3258 \HyOpt@CheckDvi{latex2html}{}%
3259 \Hy@AtBeginDocument{\@@@latextohtmlX}%
3260 }%
3261 }

```

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

```

3262 \DeclareVoidOption{ps2pdf}{}%
3263 \HyOpt@CheckDvi{ps2pdf}{}%
3264 \def\Hy@driver{hdvips}%
3265 \PassOptionsToPackage{dvips}{color}%
3266 }%
3267 }
3268 \let\HyOpt@DriverFallback\ltx@empty
3269 \define@key{Hyp}{driverfallback}{}%
3270 \ifHy@DviMode
3271   \def\HyOpt@DriverFallback{#1}%
3272   \Hy@Match\HyOpt@DriverFallback{}{%
3273     ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3274     latex2html|tex4ht)$%
3275   }{}{%
3276     \Hy@Warning{%
3277       Invalid driver `#1' for option\MessageBreak
3278       `driverfallback'%

```

```

3279     }%
3280     \let\HyOpt@DriverFallback\ltx@empty
3281   }%
3282 \fi
3283 }

3284 \let\HyOpt@CustomDriver\ltx@empty
3285 \define@key{Hyp}{customdriver}{%
3286   \IfFileExists{#1.def}{%
3287     \def\HyOpt@CustomDriver{#1}%
3288   }{%
3289     \Hy@Warning{%
3290       Missing driver file `#1.def',\MessageBreak
3291       ignoring custom driver%
3292     }%
3293   }%
3294 }

```

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.

```

3295 \define@key{Hyp}{hyperfigures}[true]{%
3296   \Hy@boolkey{hyperfigures}{#1}%
3297 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

3298 \define@key{Hyp}{hyperfootnotes}[true]{%
3299   \Hy@boolkey{hyperfootnotes}{#1}%
3300 }

```

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

```

3301 \def\back@none{none}
3302 \def\back@section{section}
3303 \def\back@page{page}
3304 \def\back@slide{slide}
3305 \define@key{Hyp}{backref}[section]{%
3306   \lowercase{\def\Hy@tempa{#1}}%
3307   \ifx\Hy@tempa\@empty
3308     \let\Hy@tempa\back@section
3309   \fi
3310   \ifx\Hy@tempa\Hy@false
3311     \let\Hy@tempa\back@none
3312   \fi
3313   \ifx\Hy@tempa\back@slide
3314     \let\Hy@tempa\back@section
3315   \fi
3316   \ifx\Hy@tempa\back@page
3317     \PassOptionsToPackage{hyperpageref}{backref}%
3318     \Hy@backreftrue
3319   \else
3320     \ifx\Hy@tempa\back@section
3321       \PassOptionsToPackage{hyperref}{backref}%
3322       \Hy@backreftrue
3323     \else
3324       \ifx\Hy@tempa\back@none
3325         \Hy@backreffalse
3326       \else

```

```

3327 \Hy@WarnOptionValue{#1}{backref}{%
3328 `section', `slide', `page', `none',\MessageBreak
3329 or `false'}%
3330 \fi
3331 \fi
3332 \fi
3333 }
3334 \define@key{Hyp}{pagebackref}[true]{%
3335 \edef\Hy@tempa{#1}%
3336 \lowercase\expandafter{%
3337 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3338 }%
3339 \ifx\Hy@tempa\@empty
3340 \let\Hy@tempa\Hy@true
3341 \fi
3342 \ifx\Hy@tempa\Hy@true
3343 \PassOptionsToPackage{hyperpageref}{backref}%
3344 \Hy@backreftrue
3345 \else
3346 \ifx\Hy@tempa\Hy@false
3347 \Hy@backreffalse
3348 \else
3349 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
3350 \fi
3351 \fi
3352 }

```

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

```

3353 \define@key{Hyp}{hyperindex}[true]{%
3354 \Hy@boolkey{hyperindex}{#1}%
3355 }

```

Configuration of encap char.

```

3356 \define@key{Hyp}{encap}[|]{%
3357 \def\HyInd@EncapChar{#1}%
3358 }

```

12 Language options

The \autoref feature depends on the language.

```

3359 \def\HyLang@afrikaans{%
3360 \def\equationautorefname{Vergelyking}%
3361 \def\footnoteautorefname{Voetnota}%
3362 \def\itemautorefname{Item}%
3363 \def\figureautorefname{Figuur}%
3364 \def\tableautorefname{Tabel}%
3365 \def\partautorefname{Deel}%
3366 \def\appendixautorefname{Bylae}%
3367 \def\chapterautorefname{Hoofstuk}%
3368 \def\sectionautorefname{Afdeling}%
3369 \def\subsectionautorefname{Subafdeling}%
3370 \def\subsubsectionautorefname{Subsubafdeling}%
3371 \def\paragraphautorefname{Paragraaf}%
3372 \def\subparagraphautorefname{Subparagraaf}%
3373 \def\FancyVerbLineautorefname{Lyn}%
3374 \def\theoremautorefname{Teorema}%

```

```

3375 \def\pageautorefname{Bladsy}%
3376 }
3377 \def\HyLang@english{%
3378 \def\equationautorefname{Equation}%
3379 \def\footnoteautorefname{footnote}%
3380 \def\itemautorefname{item}%
3381 \def\figureautorefname{Figure}%
3382 \def\tableautorefname{Table}%
3383 \def\partautorefname{Part}%
3384 \def\appendixautorefname{Appendix}%
3385 \def\chapterautorefname{chapter}%
3386 \def\sectionautorefname{section}%
3387 \def\subsectionautorefname{subsection}%
3388 \def\subsubsectionautorefname{subsubsection}%
3389 \def\paragraphautorefname{paragraph}%
3390 \def\subparagraphautorefname{subparagraph}%
3391 \def\FancyVerbLineautorefname{line}%
3392 \def\theoremautorefname{Theorem}%
3393 \def\pageautorefname{page}%
3394 }
3395 \def\HyLang@french{%
3396 \def\equationautorefname{'Equation}%
3397 \def\footnoteautorefname{note}%
3398 \def\itemautorefname{item}%
3399 \def\figureautorefname{Figure}%
3400 \def\tableautorefname{Tableau}%
3401 \def\partautorefname{Partie}%
3402 \def\appendixautorefname{Appendice}%
3403 \def\chapterautorefname{chapitre}%
3404 \def\sectionautorefname{section}%
3405 \def\subsectionautorefname{sous-section}%
3406 \def\subsubsectionautorefname{sous-sous-section}%
3407 \def\paragraphautorefname{paragraphe}%
3408 \def\subparagraphautorefname{sous-paragraphe}%
3409 \def\FancyVerbLineautorefname{ligne}%
3410 \def\theoremautorefname{Th\'eor\`eme}%
3411 \def\pageautorefname{page}%
3412 }
3413 \def\HyLang@german{%
3414 \def\equationautorefname{Gleichung}%
3415 \def\footnoteautorefname{Fu\ss note}%
3416 \def\itemautorefname{Punkt}%
3417 \def\figureautorefname{Abbildung}%
3418 \def\tableautorefname{Tabelle}%
3419 \def\partautorefname{Teil}%
3420 \def\appendixautorefname{Anhang}%
3421 \def\chapterautorefname{Kapitel}%
3422 \def\sectionautorefname{Abschnitt}%
3423 \def\subsectionautorefname{Unterabschnitt}%
3424 \def\subsubsectionautorefname{Unterunterabschnitt}%
3425 \def\paragraphautorefname{Absatz}%
3426 \def\subparagraphautorefname{Unterabsatz}%
3427 \def\FancyVerbLineautorefname{Zeile}%
3428 \def\theoremautorefname{Theorem}%
3429 \def\pageautorefname{Seite}%
3430 }
3431 \def\HyLang@italian{%

```



```

3432 \def\equationautorefname{Equazione}%
3433 \def\footnoteautorefname{nota}%
3434 \def\itemautorefname{punto}%
3435 \def\figureautorefname{Figura}%
3436 \def\tableautorefname{Tabella}%
3437 \def\partautorefname{Parte}%
3438 \def\appendixautorefname{Appendice}%
3439 \def\chapterautorefname{Capitolo}%
3440 \def\sectionautorefname{sezione}%
3441 \def\subsectionautorefname{sottosezione}%
3442 \def\subsubsectionautorefname{sottosottosezione}%
3443 \def\paragraphautorefname{paragrafo}%
3444 \def\subparagraphautorefname{sottoparagrafo}%
3445 \def\FancyVerbLineautorefname{linea}%
3446 \def\theoremautorefname{Teorema}%
3447 \def\pageautorefname{Pag.\@}%
3448 }
3449 \def\HyLang@magyar{%
3450 \def\equationautorefname{Egyenlet}%
3451 \def\footnoteautorefname{l'abjegyzet}%
3452 \def\itemautorefname{Elem}%
3453 \def\figureautorefname{'Abra}%
3454 \def\tableautorefname{T'abl'azat}%
3455 \def\partautorefname{R'esz}%
3456 \def\appendixautorefname{F"uggel'ek}%
3457 \def\chapterautorefname{fejezet}%
3458 \def\sectionautorefname{szakasz}%
3459 \def\subsectionautorefname{alszakasz}%
3460 \def\subsubsectionautorefname{alalszakasz}%
3461 \def\paragraphautorefname{bekezd'es}%
3462 \def\subparagraphautorefname{albekezd'es}%
3463 \def\FancyVerbLineautorefname{sor}%
3464 \def\theoremautorefname{T'etel}%
3465 \def\pageautorefname{oldal}%
3466 }
3467 \def\HyLang@portuges{%
3468 \def\equationautorefname{Equa\c c\~ao}%
3469 \def\footnoteautorefname{Nota de rodap'e}%
3470 \def\itemautorefname{Item}%
3471 \def\figureautorefname{Figura}%
3472 \def\tableautorefname{Tabela}%
3473 \def\partautorefname{Parte}%
3474 \def\appendixautorefname{Ap\~endice}%
3475 \def\chapterautorefname{Cap'itulo}%
3476 \def\sectionautorefname{Se\c c\~ao}%
3477 \def\subsectionautorefname{Subse\c c\~ao}%
3478 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3479 \def\paragraphautorefname{par'agrafo}%
3480 \def\subparagraphautorefname{subpar'agrafo}%
3481 \def\FancyVerbLineautorefname{linha}%
3482 \def\theoremautorefname{Teorema}%
3483 \def\pageautorefname{P'agina}%
3484 }

```

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`.

```
3485 \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`?

```
3486 \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%
```

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

```
3487 % \def\equationautorefname{%
```

```
3488 %   \cyr\cyrv\cyrery\cyr\cyra\cyrzh\cyre\cyrn\cyri\cyre
```

```
3489 % }%
```

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

```
3490 \def\footnoteautorefname{%
```

```
3491   \cyr\cyrp\cyro\cyrd\cyr\cyrt\cyr. \cyrp\cyr\cyri\cyr. %
```

```
3492 }%
```

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}`”

```
3493 % \def\footnoteautorefname{%
```

```
3494 %   \cyr\cyrp\cyro\cyrd\cyr\cyrt\cyr\cyro\cyrch\cyrn\cyro\cyre \ %
```

```
3495 %   \cyrp\cyr\cyri\cyr\cyre\cyrch\cyra\cyrn\cyri\cyre
```

```
3496 % }%
```

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

```
3497 % \def\Nomfootnoteautorefname{\cyr\cyr\cyrn\cyro\cyr\cyrk\cyra}%
```

```
3498 % \def\Accfootnoteautorefname{\cyr\cyr\cyrn\cyro\cyr\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.

```
3499 \def\itemautorefname{\cyr\cyrp.}%
```

```
3500 % \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.

```
3501 \def\figureautorefname{\cyr\cyr\cyri\cyr.}%
```

```
3502 \def\tableautorefname{\cyr\cyr\cyra\cyrb\cyr.}%
```

Names of the part, chapter, section(s) have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3503 \def\partautorefname{\cyr\cyrch.}%
```

```
3504 \def\chapterautorefname{\cyr\cyr\cyrl.}%
```

```
3505 \def\sectionautorefname{\cyr\cyr\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.

```
3506 \def\appendixautorefname{\cyr\cyrp\cyr\cyri\cyrl.}%
```

```

3507 % \def\appendixautorefname{%
3508 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrh\cyre\cyrn\cyri\cyre
3509 % }%

```

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.

```

3510 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3511 \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.

```

3512 \def\paragraphautorefname{\cyr\cyrp.}%
3513 \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.

```

3514 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3515 % \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.

```

3516 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```

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

```

3517 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3518 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

```

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

```

3519 % \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 ...

```

3520 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%

```

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

```

3521 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3522 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%

```

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

```

3523 \def\pageautorefname{\cyr\cyrs.}%
3524 }

```

```

3525 \def\HyLang@spanish{%
3526 \def\equationautorefname{Ecuaci'on}%
3527 \def\footnoteautorefname{Nota a pie de p'agina}%
3528 \def\itemautorefname{Elemento}%
3529 \def\figureautorefname{Figura}%
3530 \def\tableautorefname{Tabla}%
3531 \def\partautorefname{Parte}%
3532 \def\appendixautorefname{Ap'endice}%
3533 \def\chapterautorefname{Cap'itulo}%
3534 \def\sectionautorefname{Secci'on}%

```

```

3535 \def\subsectionautorefname{Subsecci\`on}%
3536 \def\subsubsectionautorefname{Subsubsecci\`on}%
3537 \def\paragraphautorefname{P\`arrafo}%
3538 \def\subparagraphautorefname{Subp\`arrafo}%
3539 \def\FancyVerbLineautorefname{L\`inea}%
3540 \def\theoremautorefname{Teorema}%
3541 \def\pageautorefname{P\`agina}%
3542 }

3543 \def\HyLang@catalan{%
3544 \def\equationautorefname{Equaci\`o}%
3545 \def\footnoteautorefname{Nota al peu de p\`agina}%
3546 \def\itemautorefname{Element}%
3547 \def\figureautorefname{Figura}%
3548 \def\tableautorefname{Taula}%
3549 \def\partautorefname{Part}%
3550 \def\appendixautorefname{Ap\`endix}%
3551 \def\chapterautorefname{Cap\`itol}%
3552 \def\sectionautorefname{Secci\`o}%
3553 \def\subsectionautorefname{Subsecci\`o}%
3554 \def\subsubsectionautorefname{Subsubsecci\`o}%
3555 \def\paragraphautorefname{Par\`agraf}%
3556 \def\subparagraphautorefname{Subpar\`agraf}%
3557 \def\FancyVerbLineautorefname{L\`inia}%
3558 \def\theoremautorefname{Teorema}%
3559 \def\pageautorefname{P\`agina}%
3560 }

3561 \def\HyLang@vietnamese{%
3562 \def\equationautorefname{Ph\`uhorn\`ohorn\`ng tr\`inh}%
3563 \def\footnoteautorefname{Ch\`u th\`ich}%
3564 \def\itemautorefname{m\`d\`u\`c}%
3565 \def\figureautorefname{H\`inh}%
3566 \def\tableautorefname{B\`h\`a\`ng}%
3567 \def\partautorefname{Ph\`acircumflex\`n}%
3568 \def\appendixautorefname{Ph\`d\`u\`l\`d\`u\`c}%
3569 \def\chapterautorefname{ch\`uhorn\`ohorn\`ng}%
3570 \def\sectionautorefname{m\`d\`u\`c}%
3571 \def\subsectionautorefname{m\`d\`u\`c}%
3572 \def\subsubsectionautorefname{m\`d\`u\`c}%
3573 \def\paragraphautorefname{\dj\`o\`d\`a\`n}%
3574 \def\subparagraphautorefname{\dj\`o\`d\`a\`n}%
3575 \def\FancyVerbLineautorefname{d\`ong}%
3576 \def\theoremautorefname{\DJ\`d\`i\`nh l\`y}%
3577 \def\pageautorefname{Trang}%
3578 }

```

Greek, see github issue 52

```

3579 \def\HyLang@greek{%
3580 \def\equationautorefname{\textEpsilon\textxi\acctonos\textiota\textsigma\textomega\textsigma\texteta}%
3581 \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acctonos\textiota\textomega\textsigma\texteta}%
3582 \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acctonos\textiota\textmu\textepsilon\textnu\textomicron}%
3583 \def\figureautorefname{\textSigma\textchi\acctonos\texteta\textmu\textalpha}%
3584 \def\tableautorefname{\textPi\acctonos\textiota\textnu\textalpha\textkappa\textalpha}%

```

```

3585 \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvar-
sigma}%
3586 \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\text-
rho\texttau\texteta\textmu\textalpha}%
3587 \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textal-
pha\textlambda\textalpha\textiota\textomicron}%
3588 \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\text-
eta\texttau\textalpha}%
3589 \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\ac-
conos\textomicron\texttau\texteta\texttau\textalpha}%
3590 \def\subsubsectionautorefname{\textupsilon\textpi\textomicron\textupsilon\textpi\textomicron\text-
epsilon\texttau\texteta\texttau\textalpha}%
3591 \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\text-
rho\textalpha\textphi\textomicron\textvarsigma}%
3592 \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomi-
cron\textvarsigma}%
3593 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\ac-
conos\texteta}%
3594 \def\theoremautorefname{\textTheta\textepsilon\acconos\textomega\text-
rho\texteta\textmu\textalpha}%
3595 \def\pageautorefname{\textsigma\textepsilon\textlambda\acconos\textiota\textdelta\text-
alpha}%
3596 }

3597 \def\HyLang@dutch{%
3598 \def\equationautorefname{Vergelijking}%
3599 \def\footnoteautorefname{voetnoot}%
3600 \def\itemautorefname{punt}%
3601 \def\figureautorefname{Figuur}%
3602 \def\tableautorefname{Tabel}%
3603 \def\partautorefname{Deel}%
3604 \def\appendixautorefname{Bijlage}%
3605 \def\chapterautorefname{hoofdstuk}%
3606 \def\sectionautorefname{paragraaf}%
3607 \def\subsectionautorefname{deelparagraaf}%
3608 \def\subsubsectionautorefname{deel-deelparagraaf}%
3609 \def\paragraphautorefname{alinea}%
3610 \def\subparagraphautorefname{deelalinea}%
3611 \def\FancyVerbLineautorefname{regel}%
3612 \def\theoremautorefname{Stelling}%
3613 \def\pageautorefname{pagina}%
3614 }

```

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

```

3615 \def\HyLang@addto#1#2{%
3616 #2%
3617 \@temptokena{#2}%
3618 \ifx#1\relax
3619 \let#1\@empty
3620 \fi
3621 \ifx#1\@undefined
3622 \edef#1{\the\@temptokena}%
3623 \else
3624 \toks@\expandafter{#1}%
3625 \edef#1{\the\toks@\the\@temptokena}%
3626 \fi
3627 \@temptokena{}\toks@\@temptokena

```

```

3628 }
3629 \def\HyLang@DeclareLang#1#2#3{%
3630   \ifpackagewith{babel}{#1}{%
3631     \expandafter\HyLang@addto
3632     \csname extras#1\expandafter\endcsname
3633     \csname HyLang@#2\endcsname
3634     \begingroup
3635     \edef\x{\endgroup
3636       #3%
3637     }%
3638     \x
3639     \@namedef{HyLang@#1@done}{}%
3640   }{%
3641     \begingroup
3642     \edef\x##1##2{%
3643       \noexpand\ifx##2\relax
3644         \errmessage{No definitions for language #2' found!}%
3645       \noexpand\fi
3646     \endgroup
3647     \noexpand\define@key{Hyp}{#1}[]{%
3648       \noexpand\@ifundefined{HyLang@#1@done}{%
3649         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3650         #3%
3651         \noexpand\@namedef{HyLang@#1@done}{}%
3652       }{%
3653       }%
3654     }%
3655     \expandafter\x\csname extras#1\expandafter\endcsname
3656     \csname HyLang@#2\endcsname
3657   }
3658 \HyLang@DeclareLang{english}{english}{}
3659 \HyLang@DeclareLang{UKenglish}{english}{}
3660 \HyLang@DeclareLang{british}{english}{}
3661 \HyLang@DeclareLang{USenglish}{english}{}
3662 \HyLang@DeclareLang{american}{english}{}
3663 \HyLang@DeclareLang{german}{german}{}
3664 \HyLang@DeclareLang{austrian}{german}{}
3665 \HyLang@DeclareLang{ngerman}{german}{}
3666 \HyLang@DeclareLang{naustrian}{german}{}
3667 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3668 \HyLang@DeclareLang{brazil}{portuges}{}
3669 \HyLang@DeclareLang{brazilian}{portuges}{}
3670 \HyLang@DeclareLang{portuguese}{portuges}{}
3671 \HyLang@DeclareLang{spanish}{spanish}{}
3672 \HyLang@DeclareLang{catalan}{catalan}{}
3673 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3674 \HyLang@DeclareLang{french}{french}{}
3675 \HyLang@DeclareLang{frenchb}{french}{}
3676 \HyLang@DeclareLang{francais}{french}{}
3677 \HyLang@DeclareLang{acadian}{french}{}
3678 \HyLang@DeclareLang{canadien}{french}{}
3679 \HyLang@DeclareLang{italian}{italian}{}
3680 \HyLang@DeclareLang{magyar}{magyar}{}
3681 \HyLang@DeclareLang{hungarian}{magyar}{}
3682 \HyLang@DeclareLang{greek}{greek}{}
3683 \HyLang@DeclareLang{dutch}{dutch}{}

```

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

```

3684 \DeclareVoidOption{vietnamese}{%
3685   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3686   \Hy@AtEndOfPackage{%
3687     \@ifundefined{T@PU}{-}{%
3688       \input{puvnenc.def}%
3689     }%
3690   }%
3691 }
3692 \DeclareVoidOption{vietnam}{%
3693   \HyLang@addto\extravietnam\HyLang@vietnamese
3694   \Hy@AtEndOfPackage{%
3695     \@ifundefined{T@PU}{-}{%
3696       \input{puvnenc.def}%
3697     }%
3698   }%
3699 }

```

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

```

3700 \DeclareVoidOption{arabic}{%
3701   \Hy@AtEndOfPackage{%
3702     \@ifundefined{T@PU}{-}{%
3703       \input{puarenc.def}%
3704     }%
3705   }%
3706 }

```

13 Options to change appearance of links

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

```

3707 \define@key{Hyp}{colorlinks}[true]{%
3708   \Hy@boolkey{colorlinks}{#1}%
3709 }
3710 \DeclareVoidOption{hidelinks}{%
3711   \Hy@colorlinksfalse
3712   \Hy@ocgcolorlinksfalse
3713   \Hy@frenchlinksfalse
3714   \def\Hy@colorlink##1{\begingroup}%
3715   \def\Hy@endcolorlink{\endgroup}%
3716   \def\@pdfborder{0 0 0}%
3717   \let\@pdfborderstyle\ltx@empty
3718 }
3719 \define@key{Hyp}{ocgcolorlinks}[true]{%
3720   \Hy@boolkey{ocgcolorlinks}{#1}%
3721 }
3722 \Hy@AtBeginDocument{%
3723   \begingroup
3724   \@ifundefined{OBJ@OCG@view}{%
3725     \ifHy@ocgcolorlinks
3726       \Hy@Warning{%
3727         Driver does not support `ocgcolorlinks',\MessageBreak
3728         using `colorlinks' instead%
3729       }%
3730     \fi
3731   }-}%
3732 \endgroup

```

```

3733 }
3734 \define@key{Hyp}{frenchlinks}[true]{%
3735   \Hy@boolkey{frenchlinks}{#1}%
3736 }

```

14 Bookmarking

```

3737 \begingroup\expandafter\expandafter\expandafter\endgroup
3738 \expandafter\ifx\csname chapter\endcsname\relax
3739   \def\toclevel@part{0}%
3740 \else
3741   \def\toclevel@part{-1}%
3742 \fi
3743 \def\toclevel@chapter{0}
3744 \def\toclevel@section{1}
3745 \def\toclevel@subsection{2}
3746 \def\toclevel@subsubsection{3}
3747 \def\toclevel@paragraph{4}
3748 \def\toclevel@subparagraph{5}
3749 \def\toclevel@figure{0}
3750 \def\toclevel@table{0}
3751 \@ifpackageloaded{listings}{%
3752   \providecommand*\theHlstlisting{\thelstlisting}%
3753   \providecommand*\toclevel@lstlisting{0}%
3754 }{}
3755 \@ifpackageloaded{listing}{%
3756   \providecommand*\theHlisting{\thelisting}%
3757   \providecommand*\toclevel@listing{0}%
3758 }{}

3759 \define@key{Hyp}{bookmarks}[true]{%
3760   \Hy@boolkey{bookmarks}{#1}%
3761 }

3762 \define@key{Hyp}{bookmarksopen}[true]{%
3763   \Hy@boolkey{bookmarksopen}{#1}%
3764 }

```

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.

```

3765 \let\Hy@bookmarksdepth\c@tocdepth
3766 \define@key{Hyp}{bookmarksdepth}[]{}%
3767 \begingroup
3768   \edef\x{#1}%
3769   \ifx\x\empty
3770     \global\let\Hy@bookmarksdepth\c@tocdepth
3771   \else
3772     \@ifundefined{toclevel@\x}{}%
3773     \@onelevel@sanitize\x
3774     \edef\y{\expandafter\@car\x\@nil}%

```



```

3775 \ifcase 0\expandafter\ifx\y-1\fi
3776 \expandafter\ifnum\expandafter`\y>47 %
3777 \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3778 \Hy@Warning{Unknown document division name (\x)}%
3779 \else
3780 \setbox\z@=\hbox{%
3781 \count@=\x
3782 \xdef\Hy@bookmarksdepth{\the\count@}%
3783 }%
3784 \fi
3785 }{%
3786 \setbox\z@=\hbox{%
3787 \count@=\csname toplevel@\x\endcsname
3788 \xdef\Hy@bookmarksdepth{\the\count@}%
3789 }%
3790 }%
3791 \fi
3792 \endgroup
3793 }

```

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

```

3794 \define@key{Hyp}{bookmarksopenlevel}{%
3795 \def\@bookmarksopenlevel{#1}%
3796 }
3797 \def\@bookmarksopenlevel{\maxdimen}
3798 % `bookmarkstype' to specify which `toc' file to mimic
3799 \define@key{Hyp}{bookmarkstype}{%
3800 \def\Hy@bookmarkstype{#1}%
3801 }
3802 \def\Hy@bookmarkstype{toc}

```

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

```

3803 \define@key{Hyp}{bookmarksnumbered}[true]{%
3804 \Hy@boolkey{bookmarksnumbered}{#1}%
3805 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3806 \define@key{Hyp}{CJKbookmarks}[true]{%
3807 \Hy@boolkey{CJKbookmarks}{#1}%
3808 }

3809 \def\Hy@temp#1{%
3810 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3811 }
3812 \def\Hy@@temp#1#2#3{%
3813 \define@key{Hyp}{#2color}{%
3814 \HyColor@HyperrefColor{##1}#1%
3815 }%
3816 \def#1{#3}%
3817 }
3818 \Hy@temp{link}{red}
3819 \Hy@temp{anchor}{black}
3820 \Hy@temp{cite}{green}
3821 \Hy@temp{file}{cyan}
3822 \Hy@temp{url}{magenta}
3823 \Hy@temp{menu}{red}
3824 \Hy@temp{run}{\@filecolor}
3825 \define@key{Hyp}{pagecolor}{%

```

```

3826 \Hy@WarningPageColor
3827 }
3828 \def\Hy@WarningPageColor{%
3829 \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3830 \global\let\Hy@WarningPageColor\relax
3831 }
3832 \define@key{Hyp}{allcolors}{%
3833 \HyColor@HyperrefColor{#1}\@linkcolor
3834 \HyColor@HyperrefColor{#1}\@anchorcolor
3835 \HyColor@HyperrefColor{#1}\@citecolor
3836 \HyColor@HyperrefColor{#1}\@filecolor
3837 \HyColor@HyperrefColor{#1}\@urlcolor
3838 \HyColor@HyperrefColor{#1}\@menucolor
3839 \HyColor@HyperrefColor{#1}\@runcolor
3840 }

3841 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3842 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3843 \let\@baseurl\@empty
3844 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3845 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3846 \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.

```

3847 \let\@pdfpagetransition\relax
3848 \define@key{Hyp}{pdfpagetransition}{%
3849 \def\@pdfpagetransition{#1}%
3850 }

```

`\@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.

```

3851 \let\@pdfpageduration\relax
3852 \define@key{Hyp}{pdfpageduration}{%
3853 \def\@pdfpageduration{#1}%
3854 \Hy@Match\@pdfpageduration{}{%
3855 ~(|[0-9]+\.[0-9]*|[0-9]*\.[0-9]+)%$%
3856 }{}{%
3857 \Hy@Warning{%
3858 Invalid value `\'@pdfpageduration'\MessageBreak
3859 of option `pdfpageduration'\MessageBreak
3860 is replaced by an empty value%
3861 }%
3862 \let\@pdfpageduration\ltx@empty
3863 }%
3864 }

```

The entry for the `/Hid` key in the page object is only necessary, if it is used and set to true for at least one time. If it is always false, then the `/Hid` key is not written to the pdf page object in order not to enlarge the pdf file.

```

3865 \newif\ifHy@useHidKey
3866 \Hy@useHidKeyfalse

```

```

3867 \define@key{Hyp}{pdfpagehidden}[true]{%
3868   \Hy@boolkey{pdfpagehidden}{#1}%
3869   \ifHy@pdfpagehidden
3870     \global\Hy@useHidKeytrue
3871   \fi
3872 }

```

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).

```

3873 \def\Hy@ColorList{cite,file,link,menu,run,url}
3874 \@for\Hy@temp:=\Hy@ColorList\do{%
3875   \edef\Hy@temp{%
3876     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3877       \noexpand\HyColor@HyperrefBorderColor
3878       {##1}%
3879       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3880       {hyperref}%
3881       {\Hy@temp bordercolor}%
3882     }%
3883   }%
3884   \Hy@temp
3885 }
3886 \define@key{Hyp}{pagebordercolor}{%
3887   \Hy@WarningPageBorderColor
3888 }
3889 \def\Hy@WarningPageBorderColor{%
3890   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3891   \global\let\Hy@WarningPageBorderColor\relax
3892 }
3893 \define@key{Hyp}{allbordercolors}{%
3894   \def\Hy@temp##1##2{%
3895     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3896   }%
3897   \Hy@temp\@citebordercolor{cite}%
3898   \Hy@temp\@filebordercolor{file}%
3899   \Hy@temp\@linkbordercolor{link}%
3900   \Hy@temp\@menubordercolor{menu}%
3901   \Hy@temp\@runbordercolor{run}%
3902   \Hy@temp\@urlbordercolor{url}%
3903 }
3904 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3905 \Hy@DefNameKey{pdfhighlight}{%
3906   \do{/I}{Invert}%
3907   \do{/N}{None}%
3908   \do{/O}{Outline}%
3909   \do{/P}{Push}%
3910 }
3911 \def\Hy@setpdfhighlight{%
3912   \ifx\@pdfhighlight\@empty
3913     \else
3914       /H\@pdfhighlight

```

```

3915 \fi
3916 }
3917 \define@key{Hyp}{pdfborder}{%
3918 \let\Hy@temp\@pdfborder
3919 \def\@pdfborder{#1}%
3920 \Hy@Match\@pdfborder{}{%
3921 ~\HyPat@NonNegativeReal/ %
3922 \HyPat@NonNegativeReal/ %
3923 \HyPat@NonNegativeReal/%
3924 ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?${}%
3925 }{}{%
3926 \Hy@Warning{%
3927 Invalid value ~\@pdfborder'\MessageBreak
3928 for option `pdfborder'.\MessageBreak
3929 Option setting is ignored%
3930 }%
3931 \let\@pdfborder\Hy@temp
3932 }%
3933 }
3934 \define@key{Hyp}{pdfborderstyle}{%
3935 \let\Hy@temp\@pdfborderstyle
3936 \def\@pdfborderstyle{#1}%
3937 \Hy@Match\@pdfborderstyle{}{%
3938 ~%
3939 ( */Type */Border%
3940 | */W +\HyPat@NonNegativeReal/%
3941 | */S */[SDBIU]%
3942 | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))?)?}%
3943 )* *${}%
3944 }{}{%
3945 \Hy@Warning{%
3946 Invalid value ~\@pdfborderstyle'\MessageBreak
3947 for option `pdfborderstyle'.\MessageBreak
3948 Option setting is ignored%
3949 }%
3950 \let\@pdfborderstyle\Hy@temp
3951 }%
3952 }
3953 \def\Hy@setpdfborder{%
3954 \ifx\@pdfborder\@empty
3955 \else
3956 /Border[\@pdfborder]%
3957 \fi
3958 \ifx\@pdfborderstyle\@empty
3959 \else
3960 /BS<<\@pdfborderstyle>>%
3961 \fi
3962 }
3963 \Hy@DefNameKey{pdfpagemode}{%
3964 \do{UseNone}{}%
3965 \do{UseOutlines}{}%
3966 \do{UseThumbs}{}%
3967 \do{FullScreen}{}%
3968 \do{UseOC}{PDF 1.5}%
3969 \do{UseAttachments}{PDF 1.6}%
3970 }
3971 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%

```

```

3972 \do{UseNone}{}%
3973 \do{UseOutlines}{}%
3974 \do{UseThumbs}{}%
3975 \do{FullScreen}{}%
3976 \do{UseOC}{PDF 1.5}%
3977 \do{UseAttachments}{PDF 1.6}%
3978 }
3979 \Hy@DefNameKey{pdfdirection}{%
3980 \do{L2R}{Left to right}%
3981 \do{R2L}{Right to left}%
3982 }
3983 \Hy@DefNameKey{pdfviewarea}{%
3984 \do{MediaBox}{}%
3985 \do{CropBox}{}%
3986 \do{BleedBox}{}%
3987 \do{TrimBox}{}%
3988 \do{ArtBox}{}%
3989 }
3990 \Hy@DefNameKey{pdfviewclip}{%
3991 \do{MediaBox}{}%
3992 \do{CropBox}{}%
3993 \do{BleedBox}{}%
3994 \do{TrimBox}{}%
3995 \do{ArtBox}{}%
3996 }
3997 \Hy@DefNameKey{pdfprintarea}{%
3998 \do{MediaBox}{}%
3999 \do{CropBox}{}%
4000 \do{BleedBox}{}%
4001 \do{TrimBox}{}%
4002 \do{ArtBox}{}%
4003 }
4004 \Hy@DefNameKey{pdfprintclip}{%
4005 \do{MediaBox}{}%
4006 \do{CropBox}{}%
4007 \do{BleedBox}{}%
4008 \do{TrimBox}{}%
4009 \do{ArtBox}{}%
4010 }
4011 \Hy@DefNameKey{pdfprintscaling}{%
4012 \do{AppDefault}{}%
4013 \do{None}{}%
4014 }
4015 \Hy@DefNameKey{pdfduplex}{%
4016 \do{Simplex}{}%
4017 \do{DuplexFlipShortEdge}{}%
4018 \do{DuplexFlipLongEdge}{}%
4019 }
4020 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
4021 \do{true}{}%
4022 \do{false}{}%
4023 }
4024 \define@key{Hyp}{pdfprintpagerange}{%
4025 \def\@pdfprintpagerange{#1}%
4026 }
4027 \Hy@DefNameKey{pdfnumcopies}{%
4028 \do{2}{two copies}%

```

```

4029 \do{3}{three copies}%
4030 \do{4}{four copies}%
4031 \do{5}{five copies}%
4032 }

4033 \define@key{Hyp}{pdfusetitle}[true]{%
4034 \Hy@boolkey{pdfusetitle}{#1}%
4035 }
4036 \def\HyXeTeX@CheckUnicode{%
4037 \ifxetex
4038 \ifHy@unicode
4039 \else
4040 \Hy@WarningNoLine{%
4041 XeTeX driver only supports unicode.\MessageBreak
4042 Enabling option `unicode'%
4043 }%
4044 \kvsetkeys{Hyp}{unicode}%
4045 \fi
4046 \else
4047 \let\HyXeTeX@CheckUnicode\relax
4048 \fi
4049 }
4050 \def\HyPsd@PrerenderUnicode#1{%
4051 \begingroup
4052 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
4053 \else
4054 \sbox0{%
4055 \let\GenericInfo\@gobbletwo
4056 \let\GenericWarning\@gobbletwo
4057 \let\GenericError\@gobblefour
4058 \PrerenderUnicode{#1}%
4059 }%
4060 \fi
4061 \endgroup
4062 }
4063 \define@key{Hyp}{pdftitle}{%
4064 \HyXeTeX@CheckUnicode
4065 \HyPsd@XeTeXBigCharstrue
4066 \HyPsd@PrerenderUnicode{#1}%
4067 \pdfstringdef\@pdftitle{#1}%
4068 }
4069 \define@key{Hyp}{pdfauthor}{%
4070 \HyXeTeX@CheckUnicode
4071 \HyPsd@XeTeXBigCharstrue
4072 \HyPsd@PrerenderUnicode{#1}%
4073 \pdfstringdef\@pdfauthor{#1}%
4074 }
4075 \define@key{Hyp}{pdfproducer}{%
4076 \HyXeTeX@CheckUnicode
4077 \HyPsd@XeTeXBigCharstrue
4078 \HyPsd@PrerenderUnicode{#1}%
4079 \pdfstringdef\@pdfproducer{#1}%
4080 }
4081 \define@key{Hyp}{pdfcreator}{%
4082 \HyXeTeX@CheckUnicode
4083 \HyPsd@XeTeXBigCharstrue
4084 \HyPsd@PrerenderUnicode{#1}%
4085 \pdfstringdef\@pdfcreator{#1}%

```

```

4086 }
4087 \define@key{Hyp}{addtopdfcreator}{%
4088 \HyXeTeX@CheckUnicode
4089 \HyPsd@XeTeXBigCharstrue
4090 \HyPsd@PrerenderUnicode{#1}%
4091 \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
4092 }
4093 \define@key{Hyp}{pdfcreationdate}{%
4094 \begingroup
4095 \Hy@unicodetrue
4096 \pdfstringdef\@pdfcreationdate{#1}%
4097 \endgroup
4098 }
4099 \define@key{Hyp}{pdfmoddate}{%
4100 \begingroup
4101 \Hy@unicodetrue
4102 \pdfstringdef\@pdfmoddate{#1}%
4103 \endgroup
4104 }
4105 \define@key{Hyp}{pdfsubject}{%
4106 \HyXeTeX@CheckUnicode
4107 \HyPsd@XeTeXBigCharstrue
4108 \HyPsd@PrerenderUnicode{#1}%
4109 \pdfstringdef\@pdfsubject{#1}%
4110 }
4111 \define@key{Hyp}{pdfkeywords}{%
4112 \HyXeTeX@CheckUnicode
4113 \HyPsd@XeTeXBigCharstrue
4114 \HyPsd@PrerenderUnicode{#1}%
4115 \pdfstringdef\@pdfkeywords{#1}%
4116 }
4117 \define@key{Hyp}{pdftrapped}{%
4118 \lowercase{\edef\Hy@temp{#1}}%
4119 \ifx\Hy@temp\HyInfo@trapped@true
4120 \def\@pdftrapped{True}%
4121 \else
4122 \ifx\Hy@temp\HyInfo@trapped@false
4123 \def\@pdftrapped{False}%
4124 \else
4125 \ifx\Hy@temp\HyInfo@trapped@unknown
4126 \def\@pdftrapped{Unknown}%
4127 \else
4128 \ifx\Hy@temp\@empty
4129 \else
4130 \Hy@Warning{%
4131   Unsupported value `#1'\MessageBreak
4132   for option `pdftrapped'%
4133 }%
4134 \fi
4135 \def\@pdftrapped{}%
4136 \fi
4137 \fi
4138 \fi
4139 }
4140 \def\HyInfo@trapped@true{true}
4141 \def\HyInfo@trapped@false{false}
4142 \def\HyInfo@trapped@unknown{unknown}

```

```

4143 \def\HyInfo@TrappedUnsupported{%
4144   \ifx\@pdftrapped\@empty
4145   \else
4146     \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
4147     \gdef\HyInfo@TrappedUnsupported{}%
4148   \fi
4149 }
4150 \define@key{Hyp}{pdfinfo}{%
4151   \kvsetkeys{pdfinfo}{#1}%
4152 }
4153 \def\Hy@temp#1{%
4154   \lowercase{\Hy@temp@A{#1}}{#1}%
4155 }
4156 \def\Hy@temp@A#1#2{%
4157   \define@key{pdfinfo}{#2}{%
4158     \hypersetup{pdf#1={##1}}%
4159   }%
4160 }
4161 \Hy@temp{Title}
4162 \Hy@temp{Author}
4163 \Hy@temp{Keywords}
4164 \Hy@temp{Subject}
4165 \Hy@temp{Creator}
4166 \Hy@temp{Producer}
4167 \Hy@temp{CreationDate}
4168 \Hy@temp{ModDate}
4169 \Hy@temp{Trapped}
4170 \newif\ifHyInfo@AddonUnsupported
4171 \kv@set@family@handler{pdfinfo}{%
4172   \HyInfo@AddonHandler{#1}{#2}%
4173 }
4174 \let\HyInfo@do\relax
4175 \def\HyInfo@AddonHandler#1#2{%
4176   \ifx\kv@value\relax
4177     \Hy@Warning{%
4178       Option 'pdfinfo': ignoring key '\kv@key' without value%
4179     }%
4180   \else
4181     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
4182     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4183     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4184       \ifHyInfo@AddonUnsupported
4185         \Hy@Warning{%
4186           This driver does not support additional\MessageBreak
4187           information entries, therefore\MessageBreak
4188           '\kv@key' is ignored%
4189         }%
4190       \else
4191         \def\HyInfo@tmp##1{%
4192           \kv@define@key{pdfinfo}{##1}{%
4193             \HyXeTeX@CheckUnicode
4194             \HyPsd@XeTeXBigCharstrue
4195             \HyPsd@PrerenderUnicode{####1}%
4196             \pdfstringdef\HyInfo@Value{####1}%
4197             \global\expandafter
4198             \let\csname HyInfo@Value@##1\endcsname
4199               \HyInfo@Value

```



```

4200     }%
4201 }%
4202 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4203 \global\expandafter
4204 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4205     \csname KV@pdfinfo@\HyInfo@Key\endcsname
4206 \xdef\HyInfo@AddonList{%
4207     \HyInfo@AddonList
4208     \HyInfo@do{\HyInfo@Key}%
4209 }%
4210 \kv@parse@normalized{%
4211     \HyInfo@Key={#2}%
4212 }{%
4213     \kv@processor@default{pdfinfo}%
4214 }%
4215 \fi
4216 \else
4217     \kv@parse@normalized{%
4218         \HyInfo@Key={#2}%
4219     }{%
4220         \kv@processor@default{pdfinfo}%
4221     }%
4222 \fi
4223 \fi
4224 }
4225 \def\HyInfo@GenerateAddons{%
4226     \ifHyInfo@AddonUnsupported
4227         \def\HyInfo@Addons{}%
4228     \else
4229         \begingroup
4230             \toks@{}%
4231             \def\HyInfo@do##1{%
4232                 \EdefEscapeName\HyInfo@Key{##1}%
4233                 \edef\x{%
4234                     \toks@{%
4235                         \the\toks@
4236                         /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4237                     }%
4238                 }%
4239                 \x
4240             }%
4241             \HyInfo@AddonList
4242             \edef\x{\endgroup
4243                 \def\noexpand\HyInfo@Addons{\the\toks@}%
4244             }%
4245             \x
4246         \fi
4247     }
4248 \global\let\HyInfo@AddonList\ltx@empty
4249 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
4250 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
4251 \let\setpdflinkmargin@gobble
4252 \def\calculate@pdfview#1 #2\\{%
4253     \def\@pdfview{#1}%
4254     \ifx\@#2\\%
4255         \def\@pdfviewparams{-32768}%
4256     \else

```

```

4257 \def\@pdfviewparams{ #2}%
4258 \fi
4259 }
4260 \begingroup\expandafter\expandafter\expandafter\endgroup
4261 \expandafter\ifx\csname numexpr\endcsname\relax
4262 \def\Hy@number#1{%
4263 \expandafter\@firstofone\expandafter{\number#1}%
4264 }%
4265 \else
4266 \def\Hy@number#1{%
4267 \the\numexpr#1\relax
4268 }%
4269 \fi
4270 \define@key{Hyp}{pdfstartpage}{%
4271 \ifx\#1\%
4272 \let\@pdfstartpage\ltx@empty
4273 \else
4274 \edef\@pdfstartpage{\Hy@number{#1}}%
4275 \fi
4276 }%
4277 \define@key{Hyp}{pdfstartview}{%
4278 \ifx\#1\%
4279 \let\@pdfstartview\ltx@empty
4280 \else
4281 \hypercalcbpdef\@pdfstartview{/#1}%
4282 \fi
4283 }
4284 \def\HyPat@NonNegativeReal/{%
4285 \ *([0-9]+\.[0-9]*| [0-9]*\.[0-9]+) *%
4286 }
4287 \define@key{Hyp}{pdfremotestartview}{%
4288 \ifx\#1\%
4289 \def\@pdfremotestartview{/Fit}%
4290 \else
4291 \hypercalcbpdef\@pdfremotestartview{#1}%
4292 \edef\@pdfremotestartview{\@pdfremotestartview}%
4293 \Hy@Match\@pdfremotestartview{}{%
4294 ~{XYZ(
4295 ()| %
4296 (null|-?\HyPat@NonNegativeReal/) %
4297 (null|-?\HyPat@NonNegativeReal/) %
4298 (null|\HyPat@NonNegativeReal/)%
4299 )| % end of "XYZ"
4300 Fit(
4301 ()| %
4302 B| %
4303 (H|V|BH|BV)(%
4304 ()| %
4305 (null|\HyPat@NonNegativeReal/)%
4306 )| %
4307 R %
4308 \HyPat@NonNegativeReal/ %
4309 \HyPat@NonNegativeReal/ %
4310 \HyPat@NonNegativeReal/ %
4311 \HyPat@NonNegativeReal/%
4312 ) % end of "Fit"
4313 )$%

```

```

4314 }{}{%
4315   \Hy@Warning{%
4316     Invalid value ` \@pdfremotestartview'\MessageBreak
4317     of `pdfremotestartview'\MessageBreak
4318     is replaced by `Fit'%
4319   }%
4320   \let\@pdfremotestartview\@empty
4321 }%
4322 \ifx\@pdfremotestartview\@empty
4323   \def\@pdfremotestartview{/Fit}%
4324 \else
4325   \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4326 \fi
4327 \fi
4328 }
4329 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4330 \define@key{Hyp}{pdftoolbar}[true]{%
4331   \Hy@boolkey{pdftoolbar}{#1}%
4332 }
4333 \define@key{Hyp}{pdfmenubar}[true]{%
4334   \Hy@boolkey{pdfmenubar}{#1}%
4335 }
4336 \define@key{Hyp}{pdfwindowui}[true]{%
4337   \Hy@boolkey{pdfwindowui}{#1}%
4338 }
4339 \define@key{Hyp}{pdffitwindow}[true]{%
4340   \Hy@boolkey{pdffitwindow}{#1}%
4341 }
4342 \define@key{Hyp}{pdfcenterwindow}[true]{%
4343   \Hy@boolkey{pdfcenterwindow}{#1}%
4344 }
4345 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4346   \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4347 }
4348 \define@key{Hyp}{pdfa}[true]{%
4349   \Hy@boolkey{pdfa}{#1}%
4350 }
4351 \define@key{Hyp}{pdfnewwindow}[true]{%
4352   \def\Hy@temp{#1}%
4353   \ifx\Hy@temp\@empty
4354     \Hy@pdfnewwindowsetfalse
4355   \else
4356     \Hy@pdfnewwindowsettrue
4357     \Hy@boolkey{pdfnewwindow}{#1}%
4358   \fi
4359 }
4360 \def\Hy@SetNewWindow{%
4361   \ifHy@pdfnewwindowset
4362     /NewWindow %
4363     \ifHy@pdfnewwindow true\else false\fi
4364   \fi
4365 }
4366 \Hy@DefNameKey{pdfpagelayout}{%
4367   \do{SinglePage}{}%
4368   \do{OneColumn}{}%
4369   \do{TwoColumnLeft}{}%
4370   \do{TwoColumnRight}{}%

```

```

4371 \do{TwoPageLeft}{PDF 1.5}%
4372 \do{TwoPageRight}{PDF 1.5}%
4373 }
4374 \define@key{Hyp}{pdflang}{%
4375 \edef\@pdflang{#1}%
4376 \def\Hy@temp{\relax}%
4377 \ifx\@pdflang\Hy@temp
4378 \let\@pdflang\relax
4379 \fi
4380 \ifx\@pdflang\relax
4381 \else
4382 \ifx\@pdflang\ltx@empty
4383 \else

```

Test according to ABNF of RFC 3066.

```

4384 \Hy@Match\@pdflang{icase}{%
4385 ~%
4386 [a-z]{1,8}%
4387 (-[a-z0-9]{1,8})*%
4388 $%
4389 }{%

```

Test according to ABNF of RFC 5646.

```

4390 \Hy@Match\@pdflang{icase}{%
4391 ~%
4392 (%
4393 % langtag
4394 (% language
4395 [a-z]{2,3}%
4396 ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4397 |[a-z]{4}% reserved for future use
4398 |[a-z]{5,8}% registered language subtag
4399 )%
4400 (-[a-z]{4})?% script
4401 (-([a-z]{2}|[0-9]{3}))?% region
4402 (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4403 (-[0-9a-wyz](-[a-z0-9]{2,8})+)*% extension
4404 (-x(-[a-z0-9]{1,8})+)?% privateuse
4405 % privateuse
4406 |x(-[a-z0-9]{1,8})+%
4407 % grandfathered/irregular
4408 |en-GB-oed%
4409 |i-(ami|bnn|default|enochian|hak|klinton|lux|%
4410 mingo|navajo|pwn|tao|tay|tsu)%
4411 |sgn-(BE-FR|BE-NL|CH-DE)%
4412 % grandfathered/regular
4413 |art-lojban%
4414 |cel-gaulish%
4415 |no-(bok|nyn)%
4416 |zh-(guoyu|hakka|min|min-nan|xiang)%
4417 )%
4418 $%
4419 }{%

```

Test for unique extensions.

```

4420 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4421 \Hy@Match\@pdflang{icase}{~x-}{%
4422 % remove privateuse
4423 \edef\Hy@temp{-\@pdflang}%

```

```

4424 \Hy@Match\Hy@temp{icase}{%
4425 ~%
4426 (%
4427 (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4428 )%
4429 -x-%
4430 }{%
4431 \edef\Hy@temp{%
4432 \expandafter\strip@prefix\pdfastmatch1%
4433 }%
4434 }{}%
4435 \Hy@Match\Hy@temp{icase}{%
4436 (-[a-wyz0-9]-).*\ltx@backslashchar1%
4437 }{%
4438 \Hy@Warning{%
4439 Invalid language identifier `#1'\MessageBreak
4440 for option `pdflang', because it violates\MessageBreak
4441 well-formedness defined in RFC 4646\MessageBreak
4442 by duplicate singleton subtags%
4443 }%
4444 \let\@pdflang\relax
4445 }{}%
4446 }%
4447 }{}%

```

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

```

4448 \ifx\@pdflang\relax
4449 \else
4450 \Hy@Match\@pdflang{icase}{%
4451 ~%
4452 [a-zA-Z]{2}-%
4453 (%
4454 aa|AA|%
4455 [qQ][m-zA-Z]|%
4456 [xX][a-zA-Z]|%
4457 zz|ZZ%
4458 )%
4459 (-|$)%
4460 }{%
4461 \Hy@Warning{%
4462 Invalid language identifier `#1'\MessageBreak
4463 for option `pdflang' because of invalid country code%
4464 \MessageBreak
4465 in second subtag (RFC 3066)%
4466 }%
4467 \let\@pdflang\relax
4468 }{}%
4469 \fi
4470 }{%
4471 \Hy@Warning{%
4472 Invalid language identifier `#1'\MessageBreak
4473 for option `pdflang', because it violates\MessageBreak
4474 well-formedness defined in RFC 5646%
4475 }%
4476 \let\@pdflang\relax
4477 }%
4478 }{%
4479 \Hy@Warning{%

```

```

4480      Invalid language identifier `#1'\MessageBreak
4481      for option `pdflang' (RFC 3066)%
4482    }%
4483    \let\@pdflang\relax
4484  }%
4485  \fi
4486  \fi
4487 }
4488 \define@key{Hyp}{pdfpagelabels}[true]{%
4489   \Hy@boolkey{pdfpagelabels}{#1}%
4490 }
4491 \define@key{Hyp}{pdfescapeform}[true]{%
4492   \Hy@boolkey{pdfescapeform}{#1}%
4493 }

```

Default values:

```

4494 \def\@linkbordercolor{1 0 0}
4495 \def\@urlbordercolor{0 1 1}
4496 \def\@menubordercolor{1 0 0}
4497 \def\@filebordercolor{0 .5 .5}
4498 \def\@runbordercolor{0 .7 .7}
4499 \def\@citebordercolor{0 1 0}
4500 \def\@pdfhighlight{/I}
4501 \let\@pdftitle\ltx@empty
4502 \let\@pdfauthor\ltx@empty
4503 \let\@pdfproducer\relax
4504 \def\@pdfcreator{LaTeX with hyperref}
4505 \let\@pdfcreationdate\ltx@empty
4506 \let\@pdfmoddate\ltx@empty
4507 \let\@pdfsubject\ltx@empty
4508 \let\@pdfkeywords\ltx@empty
4509 \let\@pdftrapped\ltx@empty
4510 \let\@pdfpagescrop\ltx@empty
4511 \def\@pdfstartview{/Fit}
4512 \def\@pdfremotestartview{/Fit}
4513 \def\@pdfstartpage{1}
4514 \let\@pdfprintpagerange\ltx@empty
4515 \let\@pdflang\relax
4516 \let\PDF@SetupDoc\@empty
4517 \let\PDF@FinishDoc\@empty
4518 \let\phantomsection\@empty
4519 \let\special@paper\@empty
4520 \def\HyperDestNameFilter#1{#1}
4521 \Hy@AtBeginDocument{%
4522   \begingroup
4523     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4524     \dimen@=\x\relax
4525     \ifdim\dimen@>\z@
4526       \else
4527         \dimen@=11in\relax
4528         \Hy@WarningNoLine{%
4529           Height of page (\expandafter\string\x) %
4530           is invalid (\the\x),\MessageBreak
4531           using 11in%
4532         }%
4533       \fi
4534       \dimen@=0.99626401\dimen@
4535       \xdef\Hy@pageheight{\strip@pt\dimen@}%

```

```

4536 \endgroup
4537 }
4538 \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.

```

4539 \let\hyper@normalise\ExecuteOptions
4540 \let\ExecuteOptions\hypersetup
4541 \Hy@RestoreCatcodes
4542 \InputIfFileExists{hyperref.cfg}{-}{-}
4543 \Hy@SetCatcodes
4544 \let\ExecuteOptions\hyper@normalise
4545 \ifx\Hy@MaybeStopNow\relax
4546 \else
4547 \Hy@stoppedearlytrue
4548 \expandafter\Hy@MaybeStopNow
4549 \fi
4550 \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.

```

4551 \SetupKeyvalOptions{family=Hyp}
4552 \DeclareLocalOptions{%
4553   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4554 }

```

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

```

4555 \@ifpackagewith{hyperref}{tex4ht}{%
4556 }{%
4557   \@ifpackageloaded{tex4ht}{%
4558     \PassOptionsToPackage{tex4ht}{hyperref}%
4559   }{%
4560     \ltx@ifundefined{HCode}{%
4561     }{%
4562       \begingroup
4563       \def\Hy@pkg{tex4ht}%
4564       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4565         \def\Hy@param{#2#3}%
4566         \ifx\Hy@param\ltx@empty
4567           \expandafter\ltx@gobble
4568         \else
4569           \def\Hy@param{#3}%
4570           \ifx\Hy@param\Hy@pkg
4571             \PassOptionsToPackage{#2}{tex4ht}%
4572             \expandafter\expandafter\expandafter\@gobble
4573           \else
4574             \expandafter\expandafter\expandafter\ltx@firstofone
4575           \fi
4576         \fi
4577         {\Hy@temp@A#4\Hy@NIL}%
4578       }%
4579       \expandafter
4580       \Hy@temp@A\@documentclasshook\RequirePackage[]{\Hy@NIL
4581     \endgroup
4582     \PassOptionsToPackage{tex4ht}{hyperref}%
4583   }%
4584 }%

```

```

4585 }
4586 \let\ReadBookmarks\relax
4587 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4588 \def\Hy@xspace@end{}
4589 \ltx@ifundefined{xspaceaddexceptions}{%
4590   \Hy@AtBeginDocument{%
4591     \ltx@ifundefined{xspaceaddexceptions}{%
4592       }{%
4593         \def\Hy@xspace@end{%
4594           \ltx@gobble{end for xspace}%
4595         }%
4596         \xspaceaddexceptions{%
4597           \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4598         }%
4599       }%
4600     }%
4601   }{%
4602     \def\Hy@xspace@end{%
4603       \ltx@gobble{end for xspace}%
4604     }%
4605     \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4606   }

```

15.2 Option draft

```

4607 \Hy@AtBeginDocument{%
4608   \ifHy@draft
4609     \let\hyper@@anchor\@gobble
4610     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4611     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4612     \def\hyper@anchorend{\Hy@xspace@end}%
4613     \let\hyper@linkstart\@gobbletwo
4614     \def\hyper@linkend{\Hy@xspace@end}%
4615     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4616     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4617     \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4618     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4619     \let\PDF@SetupDoc\@empty
4620     \let\PDF@FinishDoc\@empty
4621     \let\@fifthoffive\@secondoftwo
4622     \let\@secondoffive\@secondoftwo
4623     \let\ReadBookmarks\relax
4624     \let\WriteBookmarks\relax
4625     \Hy@WarningNoLine{Draft mode on}%
4626   \fi
4627   \Hy@DisableOption{draft}%
4628   \Hy@DisableOption{nolinks}%
4629   \Hy@DisableOption{final}%
4630 }

```

15.3 PDF/A

```

4631 \Hy@DisableOption{pdfa}

```



```

4632 \ifHy@pdfa
4633   \ifnum \Hy@pdf@major@minor@version < 104
4634     \kvsetkeys{Hyp}{pdfversion=1.4}%
4635   \fi
4636   \Hy@DisableOption{pdfversion}%
4637   \def\Hy@Acrobatmenu#1#2{%
4638     \leavevmode
4639     \begingroup
4640       \edef\x{#1}%
4641       \@onelevel@sanitize\x
4642       \ifx\x\Hy@NextPage
4643         \let\y=Y%
4644       \else
4645         \ifx\x\Hy@PrevPage
4646           \let\y=Y%
4647         \else
4648           \ifx\x\Hy@FirstPage
4649             \let\y=Y%
4650           \else
4651             \ifx\x\Hy@LastPage
4652               \let\y=Y%
4653             \else
4654               \let\y=N%
4655             \fi
4656           \fi
4657         \fi
4658       \fi
4659     \expandafter\endgroup
4660     \ifx\y Y%
4661     \else
4662       \Hy@Error{%
4663         PDF/A: Named action `#1' is not permitted%
4664       }\@ehc
4665       {#2}%
4666     \expandafter\@gobble
4667   \fi
4668 }%
4669 \def\Hy@temp#1{%
4670   \expandafter\def\csname Hy@#1\endcsname{#1}%
4671   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4672 }%
4673 \Hy@temp{NextPage}%
4674 \Hy@temp{PrevPage}%
4675 \Hy@temp{FirstPage}%
4676 \Hy@temp{LastPage}%
4677 \else
4678   \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4679 \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.

```

4680 \Hy@nextfalse
4681 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
4682 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
4683 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}

```

```

4684 \ifHy@next
4685 \let\texttilde\~%
4686 \fi

4687 \def\Hy@wrapper@babel#1#2{%
4688 \begingroup
4689 \Hy@safe@activetrue
4690 \set@display@protect
4691 \edef\x{#2}%
4692 \@onelevel@sanitize\x
4693 \toks@{#1}%
4694 \edef\x{\endgroup\the\toks@{\x}}%
4695 \x
4696 }

4697 \def\Hy@WrapperDef#1{%
4698 \begingroup
4699 \escapechar=\m@ne
4700 \xdef\Hy@gtemp{%
4701 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4702 }%
4703 \endgroup
4704 \edef#1{%
4705 \noexpand\Hy@wrapper@babel
4706 \expandafter\noexpand\Hy@gtemp
4707 }%
4708 \expandafter\def\Hy@gtemp
4709 }

4710 \ifHy@hyperfigures
4711 \Hy@Info{Hyper figures ON}%
4712 \else
4713 \Hy@Info{Hyper figures OFF}%
4714 \fi
4715 \ifHy@nesting
4716 \Hy@Info{Link nesting ON}%
4717 \else
4718 \Hy@Info{Link nesting OFF}%
4719 \fi
4720 \ifHy@hyperindex
4721 \Hy@Info{Hyper index ON}%
4722 \else
4723 \Hy@Info{Hyper index OFF}%
4724 \fi
4725 \ifHy@plainpages
4726 \Hy@Info{Plain pages ON}%
4727 \else
4728 \Hy@Info{Plain pages OFF}%
4729 \fi
4730 \ifHy@backref
4731 \Hy@Info{Backreferencing ON}%
4732 \else
4733 \Hy@Info{Backreferencing OFF}%
4734 \fi
4735 \ifHy@typexml
4736 \Hy@AtEndOfPackage{%
4737 \RequirePackage{color}%
4738 \RequirePackage{nameref}[2012/07/28]%
4739 }%
4740 \fi

```

```

4741 \Hy@DisableOption{typexml}
4742 \ifHy@implicit
4743   \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4744 \else
4745   \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4746   \def\MaybeStopEarly{%
4747     \Hy@Message{Stopped early}%
4748     \Hy@AtBeginDocument{%
4749       \PDF@FinishDoc
4750       \gdef\PDF@FinishDoc{}%
4751     }%
4752   \endinput
4753 }%
4754 \Hy@AtBeginDocument{%
4755   \let\autoref\ref
4756   \let\autopageref\pageref
4757   \ifx\@pdfpagemode\@empty
4758     \gdef\@pdfpagemode{UseNone}%
4759   \fi
4760   \global\Hy@backreffalse
4761 }%
4762 \Hy@AtEndOfPackage{%
4763   \global\let\ReadBookmarks\relax
4764   \global\let\WriteBookmarks\relax
4765 }%
4766 \fi
4767 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4768 \Hy@AtEndOfPackage{%
4769   \@ifpackageloaded{tex4ht}{%
4770     \def\Hy@driver{htex4ht}%
4771     \Hy@texhttrue
4772   }{}%

```

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.

```

4773   \ifx\Hy@driver\@empty
4774   \else
4775     \ifx\pdfextension\@undefined
4776       \def\Hy@temp{hpdfTEX}%
4777     \else
4778       \def\Hy@temp{hluatex}%
4779     \fi
4780   \ifpdf
4781     \ifx\Hy@driver\Hy@temp
4782     \else
4783       \Hy@WarningNoLine{%
4784         Wrong driver `\'Hy@driver.def';\MessageBreak
4785         pdfTeX is running in PDF mode.\MessageBreak
4786         Forcing driver `\'Hy@temp.def'%
4787       }%
4788     \let\Hy@driver\Hy@temp
4789   \fi
4790 \else
4791   \ifx\Hy@driver\Hy@temp
4792     \Hy@WarningNoLine{%

```

```

4793      Wrong driver ``\Hy@driver.def';\MessageBreak
4794      pdfTeX is not running in PDF mode.\MessageBreak
4795      Using default driver%
4796  }%
4797  \let\Hy@driver\@empty
4798 \fi
4799 \fi
4800 \fi
4801 \ifHy@texht
4802 \else
4803   \ifx\Hy@driver\@empty
4804   \else
4805     \def\Hy@temp{hxtex}%
4806     \ifxetex
4807       \ifx\Hy@driver\Hy@temp
4808       \else
4809         \Hy@WarningNoLine{%
4810           Wrong driver ``\Hy@driver.def';\MessageBreak
4811           XeTeX is running.\MessageBreak
4812           Forcing driver ``\Hy@temp.def' for XeTeX%
4813         }%
4814         \let\Hy@driver\Hy@temp
4815       \fi
4816     \fi
4817   \fi
4818 \fi
4819 \ifx\Hy@driver\@empty
4820 \else
4821   \def\Hy@temp{hvtexhtm}%
4822   \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4823   \ifx\Hy@driver\Hy@temp
4824   \else
4825     \Hy@WarningNoLine{%
4826       Wrong driver ``\Hy@driver.def';\MessageBreak
4827       VTeX is running in HTML mode.\MessageBreak
4828       Forcing driver ``\Hy@temp.def'%
4829     }%
4830     \let\Hy@driver\Hy@temp
4831   \fi
4832 \else
4833   \ifx\Hy@driver\Hy@temp
4834   \Hy@WarningNoLine{%
4835     Wrong driver ``\Hy@driver.def';\MessageBreak
4836     VTeX is not running in HTML mode.\MessageBreak
4837     Using default driver%
4838   }%
4839   \let\Hy@driver\@empty
4840 \fi
4841 \fi
4842 \fi

```

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

```

4843 \let\HyOpt@DriverType\ltx@empty
4844 \ifx\HyOpt@CustomDriver\ltx@empty
4845   \ifx\Hy@driver\@empty
4846     \def\HyOpt@DriverType{ (autodetected)}%
4847     \providecommand*{\Hy@defaultdriver}{hdvips}%
4848     \ifpdf

```

```

4849 \ifx\pdfextension\@undefined
4850 \def\Hy@driver{hpdfTEX}%
4851 \else
4852 \def\Hy@driver{hLUAteX}%
4853 \fi
4854 \else
4855 \ifxetex
4856 \def\Hy@driver{hXeTeX}%
4857 \else
4858 \ifnum\ifvtex\OpMode\else\m@ne\fi=10 %
4859 \def\Hy@driver{hvtexhtm}%
4860 \def\MaybeStopEarly{%
4861 \Hy@Message{Stopped early}%
4862 \Hy@AtBeginDocument{%
4863 \PDF@FinishDoc
4864 \gdef\PDF@FinishDoc{}}%
4865 }%
4866 \endinput
4867 }%
4868 \else
4869 \ifnum\ifvtex\OpMode\else\m@ne\fi=\@ne
4870 \def\Hy@driver{hvtex}%
4871 \else
4872 \ifnum\ifvtex\OpMode\else\m@ne\fi=\tw@
4873 \def\Hy@driver{hvtex}%
4874 \else
4875 \ifx\HyOpt@DriverFallback\ltX@empty
4876 \let\Hy@driver\Hy@defaultdriver
4877 \def\HyOpt@DriverType{ (default)}%
4878 \else
4879 \begingroup
4880 \toks@{\expandafter{\HyOpt@DriverFallback}%
4881 \edef\x{\endgroup
4882 \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4883 }%
4884 \x
4885 \ifx\Hy@driver\ltX@empty
4886 \let\Hy@driver\Hy@defaultdriver
4887 \def\HyOpt@DriverType{ (default)}%
4888 \else
4889 \def\HyOpt@DriverType{ (fallback)}%
4890 \fi
4891 \fi
4892 \fi
4893 \fi
4894 \fi
4895 \fi
4896 \fi
4897 \ifx\Hy@driver\Hy@defaultdriver
4898 \def\Hy@temp{hdvwind}%
4899 \ifx\Hy@temp\Hy@driver
4900 \kvsetkeys{Hyp}{colorlinks}%
4901 \PassOptionsToPackage{dviwindo}{color}%
4902 \fi
4903 \fi
4904 \fi
4905 \else

```

```

4906 \def\HyOpt@DriverType{ (custom)}%
4907 \let\Hy@driver\HyOpt@CustomDriver
4908 \fi
4909 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4910 \chardef\Hy@VersionChecked=0 %
4911 \input{\Hy@driver.def}%
4912 \ifcase\Hy@VersionChecked
4913 \Hy@VersionCheck{\Hy@driver.def}%
4914 \fi
4915 \let\@unprocessedoptions\relax
4916 \Hy@RestoreCatcodes
4917 \Hy@DisableOption{tex4ht}%
4918 \Hy@DisableOption{pdftex}%
4919 \Hy@DisableOption{nativpdf}%
4920 \Hy@DisableOption{dvipdfm}%
4921 \Hy@DisableOption{dvipdfmx}%
4922 \Hy@DisableOption{dvipdfmx-outline-open}%
4923 \Hy@DisableOption{pdfmark}%
4924 \Hy@DisableOption{dvips}%
4925 \Hy@DisableOption{hypertex}%
4926 \Hy@DisableOption{vtex}%
4927 \Hy@DisableOption{vtexpdfmark}%
4928 \Hy@DisableOption{dviwindo}%
4929 \Hy@DisableOption{dvipsone}%
4930 \Hy@DisableOption{textures}%
4931 \Hy@DisableOption{latex2html}%
4932 \Hy@DisableOption{ps2pdf}%
4933 \Hy@DisableOption{xetex}%
4934 \Hy@DisableOption{driverfallback}%
4935 \Hy@DisableOption{customdriver}%
4936 \Hy@DisableOption{pdfversion}%
4937 }

```

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.

```

4938 \newif\ifHy@DvipdfmxOutlineOpen
4939 \ifxetex
4940 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4941 \else
4942 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4943 \Hy@DvipdfmxOutlineOpenttrue
4944 \fi
4945 \fi
4946 \begingroup\expandafter\expandafter\expandafter\endgroup
4947 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4948 \else
4949 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4950 \Hy@DvipdfmxOutlineOpenttrue
4951 \fi
4952 \fi

```

15.4.2 Bookmarks

```

4953 \def\WriteBookmarks{0}
4954 \def\@bookmarkopenstatus#1{%
4955 \ifHy@bookmarksopen

```

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

```

4956 \ifnum#1<\expandafter\@firstofone\expandafter
4957       {\number\@bookmarksopenlevel} % explicit space
4958 \else
4959   -%
4960 \fi
4961 \else
4962   -%
4963 \fi
4964 }
4965 \ifHy@bookmarks
4966 \Hy@Info{Bookmarks ON}%
4967 \ifx\@pdfpagemode\@empty
4968 \def\@pdfpagemode{UseOutlines}%
4969 \fi
4970 \else
4971 \let\@bookmarkopenstatus\ltx@gobble
4972 \Hy@Info{Bookmarks OFF}%
4973 \Hy@AtEndOfPackage{%
4974   \global\let\ReadBookmarks\relax
4975   \global\let\WriteBookmarks\relax
4976 }%
4977 \ifx\@pdfpagemode\@empty
4978 \def\@pdfpagemode{UseNone}%
4979 \fi
4980 \fi
4981 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
4982 \def\Hy@CatcodeWrapper#1{%
4983 \let\Hy@endWrap\ltx@empty
4984 \def\TMP@EnsureCode##1##2{%
4985   \edef\Hy@endWrap{%
4986     \Hy@endWrap
4987     \catcode##1 \the\catcode##1\relax
4988   }%
4989   \catcode##1 ##2\relax
4990 }%
4991 \TMP@EnsureCode{10}{12}% ^^J
4992 \TMP@EnsureCode{33}{12}% !
4993 \TMP@EnsureCode{34}{12}% "
4994 \TMP@EnsureCode{36}{3}% $ (math)
4995 \TMP@EnsureCode{38}{4}% & (alignment)
4996 \TMP@EnsureCode{39}{12}% '
4997 \TMP@EnsureCode{40}{12}% (
4998 \TMP@EnsureCode{41}{12}% )
4999 \TMP@EnsureCode{42}{12}% *
5000 \TMP@EnsureCode{43}{12}% +
5001 \TMP@EnsureCode{44}{12}% ,
5002 \TMP@EnsureCode{45}{12}% -
5003 \TMP@EnsureCode{46}{12}% .
5004 \TMP@EnsureCode{47}{12}% /
5005 \TMP@EnsureCode{58}{12}% :
5006 \TMP@EnsureCode{59}{12}% ;
5007 \TMP@EnsureCode{60}{12}% <
5008 \TMP@EnsureCode{61}{12}% =
5009 \TMP@EnsureCode{62}{12}% >
5010 \TMP@EnsureCode{63}{12}% ?
5011 \TMP@EnsureCode{91}{12}% [

```

```

5012 \TMP@EnsureCode{93}{12}% ]
5013 \TMP@EnsureCode{94}{7}% ^ (superscript)
5014 \TMP@EnsureCode{95}{8}% _ (subscript)
5015 \TMP@EnsureCode{96}{12}% `
5016 \TMP@EnsureCode{124}{12}% |
5017 \TMP@EnsureCode{126}{13}% ~ (active)
5018 #1\relax
5019 \Hy@EndWrap
5020 }

```

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

```

5021 \Hy@AtBeginDocument{%
5022   \ifHy@ocgcolorlinks
5023     \kvsetkeys{Hyp}{colorlinks}%
5024     \ifHy@pdfa
5025       \Hy@Warning{%
5026         PDF/A: Optional Content Groups are prohibited,\MessageBreak
5027         using `colorlinks' instead of `ocgcolorlinks'%
5028       }%
5029       \Hy@ocgcolorlinksfalse
5030     \fi
5031   \fi
5032   \ifHy@ocgcolorlinks
5033   \else
5034     \Hy@DisableOption{ocgcolorlinks}%
5035   \fi
5036   \ifHy@colorlinks
5037     \def\@pdfborder{0 0 0}%
5038     \let\@pdfborderstyle\@empty
5039     \ifHy@typexml
5040     \else
5041       \Hy@CatcodeWrapper{%
5042         \RequirePackage{color}%
5043       }%
5044     \fi
5045     \def\Hy@colorlink#1{%
5046       \begingroup
5047       \HyColor@UseColor#1%
5048     }%
5049     \def\Hy@endcolorlink{\endgroup}%
5050     \Hy@Info{Link coloring ON}%
5051   \else
5052     \ifHy@frenchlinks
5053       \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
5054       \def\Hy@endcolorlink{\endgroup}%
5055       \Hy@Info{French linking ON}%
5056     \else

```

for grouping consistency:

```

5057     \def\Hy@colorlink#1{\begingroup}%
5058     \def\Hy@endcolorlink{\endgroup}%
5059     \Hy@Info{Link coloring OFF}%
5060   \fi
5061 \fi
5062 \Hy@DisableOption{colorlinks}%
5063 \Hy@DisableOption{frenchlinks}%
5064 \ifHy@texht
5065   \long\def\@firstoffive#1#2#3#4#5{#1}%

```



```

5066 \long\def\@secondoffive#1#2#3#4#5{#2}%
5067 \long\def\@thirdoffive#1#2#3#4#5{#3}%
5068 \long\def\@fourthoffive#1#2#3#4#5{#4}%
5069 \long\def\@fifthoffive#1#2#3#4#5{#5}%
5070 \providecommand*\@safe@activetrue{}%
5071 \providecommand*\@safe@activesfalse{}%
5072 \def\T@ref#1{%
5073   \Hy@safe@activetrue
5074   \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5075   \Hy@safe@activesfalse
5076 }%
5077 \def\T@pageref#1{%
5078   \Hy@safe@activetrue
5079   \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5080   \Hy@safe@activesfalse
5081 }%
5082 \else
5083 \ifHy@typexml
5084 \else
5085   \Hy@CatcodeWrapper{%
5086     \RequirePackage{nameref}[2012/07/28]%
5087   }%
5088 \fi
5089 \fi
5090 \DeclareRobustCommand\ref{%
5091   \@ifstar\@refstar\T@ref
5092 }%
5093 \DeclareRobustCommand\pageref{%
5094   \@ifstar\@pagerefstar\T@pageref
5095 }%
5096 % \@ifclassloaded{memoir}{%
5097 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
5098 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
5099 %   }%
5100 % } \ltx@secondoftwo
5101 % {%
5102 %   \DeclareRobustCommand*\@nameref{%
5103 %     \@ifstar\@mem@titlerefno link\@mem@titleref
5104 %   }%
5105 % }{%
5106   \DeclareRobustCommand*\@nameref{%
5107     \@ifstar\@namerefstar\T@nameref
5108   }%
5109 % }%
5110 \ifHy@implicit
5111 \else
5112   \let \@pagerefstar\T@pageref
5113   \let \@refstar\T@ref
5114   \let \@namerefstar\T@nameref
5115 \fi
5116 }
5117 \Hy@AtBeginDocument{%
5118   \ifHy@texht
5119   \else
5120     \Hy@CatcodeWrapper\ReadBookmarks
5121   \fi
5122 }

```

```

5123 \ifHy@backref
5124 \RequirePackage{backref}%
5125 \else
5126 \let\Hy@backout\@gobble
5127 \fi
5128 \Hy@DisableOption{backref}
5129 \Hy@DisableOption{pagebackref}
5130 \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`.

```

5131 \begingroup
5132 \endlinechar=-1 %
5133 \catcode`\^^A=14 %
5134 \catcode`\^^M\active
5135 \catcode`\%\active
5136 \catcode`\#\active
5137 \catcode`\_\active
5138 \catcode`\$\active
5139 \catcode`\&\active
5140 \gdef\hyper@normalise{^^A
5141 \begingroup
5142 \catcode`\^^M\active
5143 \def^^M{ }^^A
5144 \catcode`\%\active
5145 \let%\@percentchar
5146 \let\%\@percentchar
5147 \catcode`\#\active
5148 \def#{\hyper@hash}^^A
5149 \def#{\hyper@hash}^^A
5150 \@makeother\&^^A
5151 \edef&{\string&}^^A
5152 \edef\&{\string&}^^A
5153 \edef\textunderscore{\string_}^^A
5154 \let_\textunderscore
5155 \catcode`\_\active
5156 \let_\textunderscore
5157 \let~\hyper@tilde
5158 \let~\hyper@tilde
5159 \let\textasciitilde\hyper@tilde
5160 \let\\ \@backslashchar
5161 \edef$\{ \string$ \}^^A
5162 \Hy@safe@activetrue
5163 \hyper@n@rmalise
5164 }^^A
5165 \catcode`\#=6 ^^A
5166 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5167 \gdef\hyper@n@rmalise#1#2{^^A
5168 \def\Hy@tempa{#2}^^A

```

```

5169 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5170 \ltx@ReturnAfterElseFi{^^A
5171 \hyper@@normalise{#1}^^A
5172 }^^A
5173 \else
5174 \ltx@ReturnAfterFi{^^A
5175 \hyper@@normalise{#1}{#2}^^A
5176 }^^A
5177 \fi
5178 }^^A
5179 \gdef\hyper@@normalise#1#2{^^A
5180 \edef\Hy@tempa{^^A
5181 \endgroup
5182 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
5183 }^^A
5184 \Hy@tempa
5185 }^^A
5186 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
5187 #1^^A
5188 \ifx\limits#2\limits
5189 \else
5190 \ltx@ReturnAfterFi{^^A
5191 \Hy@RemovePercentCr #2\@nil
5192 }^^A
5193 \fi
5194 }^^A
5195 \endgroup
5196 \providecommand*\hyper@chars{%
5197 \let\#\hyper@hash
5198 \let\%\@percentchar
5199 \Hy@safe@activetrue
5200 }

5201 \def\hyperlink#1#2{%
5202 \hyper@@link{}{#1}{#2}%
5203 }

5204 \def\Hy@VerboseLinkStart#1#2{%
5205 \ifHy@verbose
5206 \begingroup
5207 \Hy@safe@activetrue
5208 \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
5209 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
5210 \xdef\Hy@VerboseGlobalTemp{%
5211 \Hy@VerboseGlobalTemp, %
5212 line \the\inputlineno
5213 }%
5214 \endgroup
5215 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5216 \@onelevel@sanitize\Hy@VerboseLinkInfo
5217 \fi
5218 }

5219 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5220 \def\Hy@VerboseLinkStop{%
5221 \ifHy@verbose
5222 \begingroup
5223 \edef\x{\endgroup
5224 \write\m@ne{%

```

```

5225      Package `hyperref' Info: %
5226      End of reference \Hy@VerboseLinkInfo.%
5227    }%
5228  }%
5229  \x
5230  \fi
5231 }

5232 \def\Hy@VerboseAnchor#1{%
5233   \ifHy@verbose
5234     \begingroup
5235     \Hy@safe@activertrue
5236     \Hy@Info{Anchor `\'HyperDestNameFilter{#1}'}%
5237   \endgroup
5238   \fi
5239 }

5240 \def\Hy@AllowHyphens{%
5241   \relax
5242   \ifhmode
5243     \penalty\@M
5244     \hskip\z@skip
5245   \fi
5246 }

5247 \DeclareRobustCommand*{\href}[1][]{%
5248   \begingroup
5249   \setkeys{href}{#1}%
5250   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
5251 }
5252 \def\Hy@href#1{%
5253   \hyper@normalise\href@
5254 }
5255 \begingroup
5256   \catcode`\$=6 %
5257   \catcode`\#=12 %
5258   \gdef\href$1{\expandafter\href@split$1##\\}%
5259   \gdef\href@split$1##$2##$3\\$4{%
5260     \hyper@@link{$1}{$2}{$3}{$4}%
5261   \endgroup
5262 }%
5263 \endgroup

Option 'page'.
5264 \define@key{href}{page}{%
5265   \def\Hy@href@page{#1}%
5266 }
5267 \let\Hy@href@page\@empty
5268 \newcount\c@Hy@tempcnt
5269 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5270 \def\Hy@MakeRemoteAction{%
5271   \ifx\Hy@href@page\@empty
5272     \def\Hy@href@page{0}%
5273   \else
5274     \setcounter{Hy@tempcnt}{\Hy@href@page}%
5275     \ifnum\c@Hy@tempcnt<\@ne
5276       \Hy@Warning{%
5277         Invalid page number (\theHy@tempcnt)\MessageBreak
5278         for remote PDF file.\MessageBreak
5279         Using page 1%

```

```

5280 }%
5281 \def\Hy@href@page{0}%
5282 \else
5283 \global\advance\c@Hy@tempcnt\m@ne
5284 \edef\Hy@href@page{\theHy@tempcnt}%
5285 \fi
5286 \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.

```

5287 \ifx\Hy@href@nextactionraw\@empty
5288 \else
5289 \Hy@pdfnewwindowsettrue
5290 \Hy@pdfnewwindowtrue
5291 \fi
5292 }

```

Option ‘pdfremotestartview’.

```

5293 \define@key{href}{pdfremotestartview}{%
5294 \setkeys{Hyp}{pdfremotestartview={#1}}%
5295 }

```

Option ‘pdfnewwindow’.

```

5296 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5297 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5298 \newif\ifHy@href@ismap
5299 \define@key{href}{ismap}[true]{%
5300 \ltx@ifundefined{Hy@href@ismap#1}{%
5301 \Hy@Error{%
5302 Invalid value (#1) for key `ismap'.\MessageBreak
5303 Permitted values are `true' or `false'.\MessageBreak
5304 Ignoring `ismap'%
5305 }\\@ehc
5306 }{%
5307 \csname Hy@href@ismap#1\endcsname
5308 }%
5309 }

```

Option ‘nextactionraw’.

```

5310 \let\Hy@href@nextactionraw\@empty
5311 \define@key{href}{nextactionraw}{%
5312 \edef\Hy@href@nextactionraw{#1}%
5313 \ifx\Hy@href@nextactionraw\@empty
5314 \else
5315 \Hy@Match\Hy@href@nextactionraw{%
5316 ~(\HyPat@ObjRef/|<<.*[/|.+>>|%
5317 \[( ?\HyPat@ObjRef/|<<.*[/|.+>>)+ ?])$%
5318 }{}{%
5319 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
5320 \Hy@href@nextactionraw\MessageBreak
5321 The action is discarded%
5322 }%
5323 }%
5324 \ifx\Hy@href@nextactionraw\@empty
5325 \else
5326 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5327 \fi

```

```

5328 \fi
5329 }
5330 \def\HyPat@ObjRef/{.+}

```

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

```

5331 \RequirePackage{url}
5332 \let\HyOrg@url\url
5333 \def\Hurl{\begingroup \Url}
5334 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
5335 \def\nolinkurl@#1{\Hurl{#1}}
5336 \DeclareRobustCommand*\url{\hyper@normalise\url@}
5337 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

5338 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
5339 \providecommand\hyper@image[2]{#2}

5340 \def\hypertarget#1#2{%
5341   \ifHy@nesting
5342     \hyper@@anchor{#1}{#2}%
5343   \else
5344     \hyper@@anchor{#1}{\relax}#2%
5345   \fi
5346 }

```

`\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.

```

5347 \DeclareRobustCommand*\hyperref{%
5348   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5349 }
5350 \def\Hy@babelnormalise#1[#2]{%
5351   \begingroup
5352     \Hy@safe@activestrue
5353     \edef\Hy@tempa{%
5354       \endgroup
5355       \noexpand#1[#2]}%
5356   }%
5357   \Hy@tempa
5358 }
5359 \def\@hyperref{\hyper@normalise\@hyperref}
5360 \def\@hyperref#1#2#3{%
5361   \edef\ref@one{\ifx\\#2\\ \else#2.\fi#3}%
5362   \expandafter\tryhyper@link\ref@one\{#1}%
5363 }
5364 \def\tryhyper@link#1\\#2{%
5365   \hyper@@link{#2}{#1}%
5366 }

5367 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
5368 \def\@hyperdef#1#2#3{%, category, name, text
5369   \ifx\\#1\\%
5370     \def\Hy@AnchorName{#2}%
5371   \else
5372     \def\Hy@AnchorName{#1.#2}%
5373   \fi

```

```

5374 \ifHy@nesting
5375   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5376 \else
5377   \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5378 \fi
5379 }

```

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.

```

5380 \let\hyperrefundefinedlink\@firstofone
5381 \def\label@hyperref[#1]{%
5382   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5383 }%
5384 \def\label@@hyperref#1#2#3{%
5385   \ifx#1\relax
5386     \protect\G@refundefinedtrue
5387     \@latex@warning{%
5388       Hyper reference `#2' on page \thepage \space undefined%
5389     }%
5390     \begingroup
5391       \hyperrefundefinedlink{#3}%
5392     \endgroup
5393   \else
5394     \hyper@@link{\expandafter\@fifthoffive#1}%
5395     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5396   \fi
5397 }
5398 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5399                               % anchor text
5400   \@bsphack
5401   \ifx\\#2\\%
5402     \def\Hy@AnchorName{#3}%
5403   \else
5404     \def\Hy@AnchorName{#2.#3}%
5405   \fi
5406   \if@filesw
5407     \protected@write\@auxout{}{%
5408       \string\newlabel{#1}{\{\}\{\}\{\Hy@AnchorName\}\}%
5409     }%
5410   \fi
5411   \@esphack
5412   \ifHy@nesting
5413     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5414   \else
5415     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5416   \fi
5417 }

```

16.1 Link box support for XeTeX

```

5418 \newdimen\XeTeXLinkMargin
5419 \setlength{\XeTeXLinkMargin}{2pt}
5420 \ifxetex
5421   \font\XeTeXLink@font=pzdr at 1sp\relax
5422   \newcommand*\XeTeXLink@space{%
5423     \begingroup

```

```

5424 \XeTeXLink@font
5425 \@xxxii
5426 \endgroup
5427 }%
5428 \newcommand{\XeTeXLinkBox}[1]{%
5429 \begingroup
5430 \leavevmode
5431 \sbox\z@{#1}%
5432 \begingroup
5433 \dimen@=\dp\z@
5434 \advance\dimen@\XeTeXLinkMargin
5435 \setbox\tw@=\llap{%
5436 \hb@xt@\XeTeXLinkMargin{%
5437 \lower\dimen@\hbox{\XeTeXLink@space}%
5438 \hss
5439 }%
5440 }%
5441 \dp\tw@=\dp\z@
5442 \ht\tw@=\ht\z@
5443 \copy\tw@
5444 \endgroup
5445 \copy\z@
5446 \dimen@=\ht\z@
5447 \advance\dimen@\XeTeXLinkMargin
5448 \setbox\tw@=\rlap{%
5449 \hb@xt@\XeTeXLinkMargin{%
5450 \hss
5451 \raise\dimen@\hbox{\XeTeXLink@space}%
5452 }%
5453 }%
5454 \dp\tw@=\dp\z@
5455 \ht\tw@=\ht\z@
5456 \copy\tw@
5457 \endgroup
5458 }%
5459 \else
5460 \newcommand*\{\XeTeXLinkBox}[1]{%
5461 \begingroup
5462 \leavevmode
5463 \sbox\z@{#1}%
5464 \copy\z@
5465 \endgroup
5466 }%
5467 \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.

```

5468 \def\hyper@@link{\let\Hy@reserved@a\relax
5469 \@ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
5470 }
5471 % #1: type
5472 % #2: URL
5473 % #3: destination name

```



```

5474 % #4: text
5475 \def\hyper@link@{#1}#2#3#4{%
5476   \ltx@ifempty{#4}{% link text
5477     \Hy@Warning{Suppressing empty link}%
5478   }{%
5479     \begingroup
5480     \protected@edef\Hy@tempa{#2}%
5481     \edef\Hy@tempb{#3}%
5482     \ifx\Hy@tempa\ltx@empty
5483       \ifx\Hy@tempb\ltx@empty
5484         \Hy@Warning{Suppressing link with empty target}%
5485       \toks@{%
5486         \endgroup
5487         \ltx@secondoftwo
5488       }%
5489     \else
5490       \toks@{%
5491         \endgroup
5492         \hyper@link{#1}%
5493       }%
5494     \fi
5495   \else
5496     \toks@{%
5497       \endgroup
5498       \expandafter\hyper@readexternallink#2\{#1}%
5499     }%
5500   \fi
5501   \Hy@safe@activesfalse
5502   \toks@\expandafter{%
5503     \the\expandafter\toks@
5504     \expandafter{\Hy@tempb}{#4}%
5505   }%
5506   \the\toks@
5507 }%
5508 }

```

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.

```

5509 \def\hyper@readexternallink#1\{#2#3#4{%
5510   \begingroup
5511   \let\\\relax
5512   \expandafter\endgroup
5513   \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
5514 }
5515 \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.

```
5516 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5517 }
```

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

```
5518 \def\@pdftempwordfile{file}%
5519 \def\@pdftempwordrun{run}%
5520 \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**:

```
5521 \ifx\\\#6\\\%
5522 \@hyper@linkfile file:#7\\\{#3}{#2}{#7}%
5523 \else
5524 \ifx\\\#4\\\%
5525 \@hyper@linkfile file:#7\\\{#3}{#2}{#7}%
5526 \else
```

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

```
5527 \def\@pdftempa{#4}%
5528 \ifx\@pdftempa\@pdftempwordfile
5529 \@hyper@linkfile#7\\\{#3}{#2}{#7}%
5530 \else
```

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

```
5531 \ifx\@pdftempa\@pdftempwordrun
5532 \ifHy@pdfa
5533 \Hy@Error{%
5534 PDF/A: Launch action is prohibited%
5535 }\@ehc
5536 \begingroup
5537 \leavevmode
5538 #2%
5539 \endgroup
5540 \else
5541 \@hyper@launch#7\\\{#3}{#2}%
5542 \fi
5543 \else
```

otherwise its a URL

```
5544 \hyper@linkurl{#3}{#7\ifx\\\#2\\\else\hyper@hash#2\fi}%
5545 \fi
5546 \fi
5547 \fi
5548 \fi
5549 }
```

By default, turn run: into file:

```
5550 \def\@hyper@launch run:#1\\\#2#3{% filename, anchor text, linkname
5551 \hyper@linkurl{#2}{%
5552 \Hy@linkfileprefix
5553 #1%
5554 \ifx\\\#3\\\%
5555 \else
```

```

5556 \hyper@hash
5557 #3%
5558 \fi
5559 }%
5560 }

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

5561 \def\@hyper@linkfile file:#1\|#2#3#4{%
5562 %file url,link string, name, original uri
5563 \filename@parse{#1}%
5564 \ifx\filename@ext\relax
5565 \edef\filename@ext{\XR@ext}%
5566 \fi
5567 \def\use@file{\filename@area\filename@base.\filename@ext}%
5568 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5569 \hyper@linkfile{#2}{\use@file}{#3}%
5570 }{%
5571 \ifx\@baseurl\@empty
5572 \hyper@linkurl{#2}{%
5573 #4\ifx\|#3\|else\hyper@hash#3\fi
5574 }%
5575 \else
5576 \hyper@linkurl{#2}{\use@file\ifx\|#3\|else\hyper@hash#3\fi}%
5577 \fi
5578 }%
5579 }

5580 \def\Hy@IfStringEndsWith#1#2{%
5581 \begingroup
5582 \edef\x{#1}%
5583 \@onelevel@sanitize\x
5584 \edef\x{.\x}%
5585 \edef\y{#2}%
5586 \@onelevel@sanitize\y
5587 \edef\y{.\y}%
5588 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5589 \endgroup
5590 \ifx\relax##2\relax
5591 \expandafter\ltx@secondoftwo
5592 \else
5593 \expandafter\ltx@firstoftwo
5594 \fi
5595 }%
5596 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5597 }

5598 \def\Hy@StringLocalhost{localhost}
5599 \@onelevel@sanitize\Hy@StringLocalhost
5600 \def\Hy@CleanupFile#1{%
5601 \edef#1{#1}%
5602 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5603 }
5604 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5605 \begingroup
5606 \toks@{\endgroup}%
5607 \def\x{#1}%
5608 \ifx\x\@empty
5609 \def\x{#2}%

```

```

5610 \ifx\x\@empty
5611 \toks@{\endgroup\def#5{/#3}}%
5612 \else
5613 \@onelevel@sanitize\x
5614 \ifx\x\Hy@StringLocalhost
5615 \toks@{\endgroup\def#5{/#3}}%
5616 \fi
5617 \fi
5618 \fi
5619 \the\toks@
5620 }

```

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.

```

5621 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5622 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5623 \ifx\#1\%
5624 #2\Hy@Warning{Ignoring empty anchor}%
5625 \else
5626 \def\anchor@spot{#2#3}%
5627 \let\put@me@back\@empty
5628 \ifx\relax#2\relax
5629 \else
5630 \ifHy@nesting
5631 \else
5632 \ifcat a\noexpand#2\relax
5633 \else
5634 \ifcat 0\noexpand#2 \relax
5635 \else
5636 % \typeout{Anchor start is not alphanumeric %
5637 % on input line\the\inputlineno%
5638 % }%
5639 \let\anchor@spot\@empty
5640 \def\put@me@back{#2#3}%
5641 \fi
5642 \fi
5643 \fi
5644 \fi
5645 \ifHy@activeanchor
5646 \anchor@spot
5647 \else
5648 \hyper@anchor{#1}%
5649 \fi
5650 \expandafter\put@me@back
5651 \fi
5652 \let\anchor@spot\@empty
5653 }
5654 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5655 \ifHy@destlabel

\hyper@newdestlabel
5656 \def\hyper@newdestlabel#1#2{%
5657   \begingroup
5658   \Hy@safe@activetrue
5659   \edef\x{\endgroup
5660     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5661   }%
5662   \x
5663 }%

\hyper@destlabel@hook
5664 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename
5665 \newcommand*\Hy@DestRename[2]{%
5666   \ltx@ifundefined{HyDL!#1}{%
5667     \begingroup
5668     \Hy@safe@activetrue
5669     \edef\dest@name{#1}%
5670     \edef\label@name{#2}%
5671     \hyper@destlabel@hook
5672     \Hy@IsNotEmpty{dest@name}{%
5673       \Hy@IsNotEmpty{label@name}{%
5674         \global\expandafter
5675         \let\csname HyDL!#1\endcsname\ltx@empty
5676         \if@files
5677           \protected@write\@auxout{}{%
5678             \string\hyper@newdestlabel
5679             {#1}%
5680             {\label@name}%
5681           }%
5682         \fi
5683       }%
5684     }%
5685   \endgroup
5686 }{}%
5687 }%

\HyperDestRename
5688 \newcommand*\HyperDestRename[2]{%
5689   \AtBeginDocument{%
5690     \Hy@DestRename{#1}{#2}%
5691   }%
5692 }%
5693 \AtBeginDocument{%
5694   \let\HyperDestRename\Hy@DestRename
5695 }%

\Hy@IsNotEmpty
5696 \def\Hy@IsNotEmpty#1{%
5697   \ltx@ifundefined{#1}\ltx@gobble{%
5698     \expandafter\ifx\csname#1\endcsname\ltx@empty
5699     \expandafter\ltx@gobble
5700   \else
5701     \expandafter\ltx@firstofone

```

```

5702   \fi
5703   }%
5704 }%

5705 \ltx@GlobalAppendToMacro\label@hook{%
5706   \HyperDestRename\@currentHref\label@name
5707 }%

```

\HyperDestLabelReplace

```

5708 \def\HyperDestLabelReplace#1{%
5709   \ltx@ifundefined{HyDL@#1}{%
5710     #1%
5711   }{%
5712     \csname HyDL@#1\endcsname
5713   }%
5714 }%

```

\HyperDestNameFilter

```

5715 \let\HyperDestNameFilter\HyperDestLabelReplace

5716 \else

```

\hyper@newdestlabel

```

5717 \let\hyper@newdestlabel\ltx@gobbletwo

```

\HyperDestLabelReplace

```

5718 \let\HyperDestLabelReplace\ltx@firstofone

```

\HyperDestRename

@gobbletwo

```

5719 \fi

5720 \Hy@DisableOption{destlabel}

```

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

```

5721 \AddLineBeginAux{%
5722   \string\providecommand\string\hyper@newdestlabel[2]{}%
5723 }

```

19 Compatibility with the *L^AT_EX2html* package

Map our macro names on to Nikos', so that documents prepared for that system will work without change.

Note, however, that the whole complicated structure for segmenting documents is not supported; it is assumed that the user will load `html.sty` first, and then `hyperref.sty`, so that the definitions in `html.sty` take effect, and are then overridden in a few circumstances by this package.

```

5724 \let\htmladding\hyperimage

5725 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5726 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5727 \def\htmlref#1#2{% anchor text, label
5728   \label@hyperref[#{#2}]{#1}%
5729 }

```

This is really too much. The L^AT_EX2html package defines its own `\hyperref` command, with a different syntax. Was this always here? Its weird, anyway. We interpret it in the ‘printed’ way, since we are about fidelity to the page.

```

5730 \def\@@latextohtmlX{%
5731   \let\hhyperref\hyperref
5732   \def\hyperref##1##2##3##4{% anchor text for HTML
5733     % text to print before label in print
5734     % label
5735     % post-label text in print
5736     ##2\ref{##4}##3%
5737   }%
5738 }
```

20 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.

20.1 Field flags

The field flags are organized in a bit set.

```

5739 \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

```

5740 \def\HyField@NewFlag#1#2{%
5741   \lowercase{\HyField@NewOption{#2}}%
5742   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5743 }
```

`\HyField@NewFlagOnly`

```

5744 \def\HyField@NewFlagOnly#1#2{%
5745   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5746 }
```

`\HyField@NewOption` #1: option name

```

5747 \def\HyField@NewOption#1{%
5748   \expandafter\newif\csname ifFld@#1\endcsname
5749   \define@key{Field}{#1}[true]{%
5750     \lowercase{\Field@boolkey{##1}}{#1}%
5751   }%
5752 }
```

`\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

```
5753 \def\HyField@NewBitsetFlag#1#2#3#4{%
5754   \begingroup
5755   \count@=#4\relax
5756   \advance\count@\m@ne
5757   \def\x##1{%
5758     \endgroup
5759     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5760     \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5761       \expandafter\edef\csname HyField@#3@#1\endcsname{%
5762         (\number#4) #2%
5763       }%
5764     \else
5765       \expandafter\edef\csname HyField@#3@#1\endcsname{%
5766         \csname HyField@#3@#1\endcsname
5767         /#2%
5768       }%
5769     \fi
5770   }%
5771   \expandafter\x\expandafter{\the\count@}%
5772 }
```

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

```
5773 \def\HyField@UseFlag#1#2{%
5774   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5775 }
```

\HyField@@UseFlag

```
5776 \def\HyField@@UseFlag#1#2{%
5777   \bitsetSetValue{HyField@#2}{%
5778     \csname HyField@#2@#1\endcsname
5779   }{%
5780     \csname ifFld@#1\endcsname 1\else 0\fi
5781   }%
5782 }
```

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

```
5783 \def\HyField@SetFlag#1#2{%
5784   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5785 }
```

\HyField@@SetFlag

```
5786 \def\HyField@@SetFlag#1#2{%
5787   \bitsetSetValue{HyField@#2}{%
5788     \csname HyField@#2@#1\endcsname
5789   }{1}%
5790 }
```

\HyField@PrintFlags

```
5791 \def\HyField@PrintFlags#1#2{%
5792   \ifHy@verbose
5793     \begingroup
5794     \let\Hy@temp\@empty
5795     \let\MessageBreak\relax
```



```

5796 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5797 \bitsetGetSetBitList{HyField@#1}\do{%
5798 \edef\Hy@temp{%
5799 \Hy@temp
5800 \csname HyField@#1@\x\endcsname\MessageBreak
5801 }%
5802 }%
5803 \edef\x{\endgroup
5804 \noexpand\Hy@Info{%
5805 Field flags: %
5806 \expandafter\ifx\@car#1\@nil S\else/\fi
5807 #1 %
5808 \bitsetGetDec{HyField@#1} %
5809 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5810 \Hy@temp
5811 for #2%
5812 }%
5813 }\x
5814 \fi
5815 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5816 \HyField@NewFlag{Ff}{ReadOnly}{1}
5817 \HyField@NewFlag{Ff}{Required}{2}
5818 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5819 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5820 \HyField@NewFlag{Ff}{Radio}{16}
5821 \HyField@NewFlag{Ff}{Pushbutton}{17}
5822 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5823 \HyField@NewFlag{Ff}{Multiline}{13}
5824 \HyField@NewFlag{Ff}{Password}{14}
5825 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5826 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5827 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5828 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5829 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5830 \HyField@NewFlag{Ff}{Combo}{18}
5831 \HyField@NewFlag{Ff}{Edit}{19}
5832 \HyField@NewFlag{Ff}{Sort}{20}
5833 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5834 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5835 \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.

```

5836 \newif\ifFld@popdown
5837 \define@key{Field}{popdown}[true]{%
5838 \lowercase{\Field@boolkey{#1}}{popdown}%
5839 }

```

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.

```

5840 \HyField@NewFlag{F}{Invisible}{1}
5841 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5842 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5843 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5844 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5845 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5846 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5847 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5848 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7
5849 \ifHy@pdfa
5850 \def\HyField@PDFAFIWarning#1#2{%
5851   \Hy@Warning{%
5852     PDF/A: Annotation flag `#1' must\MessageBreak
5853     be set to `#2'%
5854   }%
5855 }%
5856 \Fld@invisiblefalse
5857 \def\Fld@invisibletrue{%
5858   \HyField@PDFAFIWarning{invisible}{false}%
5859 }%
5860 \Fld@hiddenfalse
5861 \def\Fld@hiddentrue{%
5862   \HyField@PDFAFIWarning{hidden}{false}%
5863 }%
5864 \Fld@printtrue
5865 \def\Fld@printfalse{%
5866   \HyField@PDFAFIWarning{print}{true}%
5867 }%
5868 \Fld@nozoomtrue
5869 \def\Fld@nozoomfalse{%
5870   \HyField@PDFAFIWarning{nozoom}{true}%
5871 }%
5872 \Fld@norotatetrue
5873 \def\Fld@norotatefalse{%
5874   \HyField@PDFAFIWarning{norotate}{true}%
5875 }%
5876 \Fld@noviewfalse
5877 \def\Fld@noviewtrue{%
5878   \HyField@PDFAFIWarning{noview}{false}%
5879 }%
5880 \fi

```

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

```

5881 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5882 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5883 \HyField@NewFlag{Submit}{GetMethod}{4}
5884 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5885 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5886 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5887 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5888 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}

```

```

5889 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5890 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5891 \HyField@NewFlag{Submit}{ExclFKey}{12}
5892 \HyField@NewFlag{Submit}{EmbedForm}{14}

5893 \define@key{Field}{export}{%
5894   \lowercase{\def\Hy@temp{#1}}%
5895   \@ifundefined{Fld@export@\Hy@temp}{%
5896     \@onelevel@sanitize\Hy@temp
5897     \Hy@Error{%
5898       Unknown export format `'\Hy@temp'.\MessageBreak
5899       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5900   }\@ehc
5901 }{%
5902   \let\Fld@export\Hy@temp
5903 }%
5904 }
5905 \def\Fld@export{fdf}
5906 \@namedef{Fld@export@fdf}{0}%
5907 \@namedef{Fld@export@html}{1}%
5908 \@namedef{Fld@export@xfdf}{2}%
5909 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5910 \def\HyField@FlagsSubmit{%
5911   \bitsetReset{HyField@Submit}%
5912   \ifcase\@nameuse{Fld@export@\Fld@export} %
5913     % FDF
5914     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5915     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5916     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5917     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5918     \HyField@UseFlag{Submit}{CanonicalFormat}%
5919     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5920     \HyField@UseFlag{Submit}{ExclFKey}%
5921     \HyField@UseFlag{Submit}{EmbedForm}%
5922   \or % HTML
5923     \HyField@SetFlag{Submit}{ExportFormat}%
5924     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5925     \HyField@UseFlag{Submit}{GetMethod}%
5926     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5927     \HyField@UseFlag{Submit}{CanonicalFormat}%
5928   \or % XFDF
5929     \HyField@SetFlag{Submit}{XFDF}%
5930     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5931     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5932     \HyField@UseFlag{Submit}{CanonicalFormat}%
5933   \or % PDF
5934     \HyField@SetFlag{Submit}{SubmitPDF}%
5935     \HyField@UseFlag{Submit}{GetMethod}%
5936   \fi
5937   \HyField@PrintFlags{Submit}{submit button field}%
5938   \bitsetIsEmpty{HyField@Submit}{%
5939     \let\Fld@submitflags\ltx@empty
5940   }{%
5941     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%

```

```

5942 }%
5943 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5944 \def\HyField@FlagsAnnot#1{%
5945   \bitsetReset{HyField@F}%
5946   \HyField@UseFlag{F}{Invisible}%
5947   \HyField@UseFlag{F}{Hidden}%
5948   \HyField@UseFlag{F}{Print}%
5949   \HyField@UseFlag{F}{NoZoom}%
5950   \HyField@UseFlag{F}{NoRotate}%
5951   \HyField@UseFlag{F}{NoView}%
5952   \HyField@UseFlag{F}{Locked}%
5953   \HyField@UseFlag{F}{ToggleNoView}%
5954   \HyField@UseFlag{F}{LockedContents}%
5955   \HyField@PrintFlags{F}{#1}%
5956   \bitsetIsEmpty{HyField@F}{%
5957     \let\Fld@annotflags\ltx@empty
5958   }{%
5959     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
5960   }%
5961 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5962 \def\HyField@FlagsPushButton{%
5963   \HyField@FlagsAnnot{push button field}%
5964   \bitsetReset{HyField@Ff}%
5965   \HyField@UseFlag{Ff}{ReadOnly}%
5966   \HyField@UseFlag{Ff}{Required}%
5967   \HyField@UseFlag{Ff}{NoExport}%
5968   \HyField@SetFlag{Ff}{Pushbutton}%
5969   \HyField@PrintFlags{Ff}{push button field}%
5970   \bitsetIsEmpty{HyField@Ff}{%
5971     \let\Fld@flags\ltx@empty
5972   }{%
5973     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5974   }%
5975 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5976 \def\HyField@FlagsCheckBox{%
5977   \HyField@FlagsAnnot{check box field}%
5978   \bitsetReset{HyField@Ff}%
5979   \HyField@UseFlag{Ff}{ReadOnly}%
5980   \HyField@UseFlag{Ff}{Required}%
5981   \HyField@UseFlag{Ff}{NoExport}%
5982   \HyField@PrintFlags{Ff}{check box field}%
5983   \bitsetIsEmpty{HyField@Ff}{%
5984     \let\Fld@flags\ltx@empty
5985   }{%
5986     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%

```

```

5987 }%
5988 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5989 \def\HyField@FlagsRadioButton{%
5990   \HyField@FlagsAnnot{radio button field}%
5991   \bitsetReset{HyField@Ff}%
5992   \HyField@UseFlag{Ff}{ReadOnly}%
5993   \HyField@UseFlag{Ff}{Required}%
5994   \HyField@UseFlag{Ff}{NoExport}%
5995   \HyField@UseFlag{Ff}{NoToggleToOff}%
5996   \HyField@SetFlag{Ff}{Radio}%
5997   \HyField@UseFlag{Ff}{RadiosInUnison}%
5998   \HyField@PrintFlags{Ff}{radio button field}%
5999   \bitsetIsEmpty{HyField@Ff}{%
6000     \let\Fld@flags\ltx@empty
6001   }{%
6002     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6003   }%
6004 }

```

20.1.7 Text fields

\HyField@FlagsText

```

6005 \def\HyField@FlagsText{%
6006   \HyField@FlagsAnnot{text field}%
6007   \bitsetReset{HyField@Ff}%
6008   \HyField@UseFlag{Ff}{ReadOnly}%
6009   \HyField@UseFlag{Ff}{Required}%
6010   \HyField@UseFlag{Ff}{NoExport}%
6011   \HyField@UseFlag{Ff}{Multiline}%
6012   \HyField@UseFlag{Ff}{Password}%
6013   \HyField@UseFlag{Ff}{FileSelect}%
6014   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6015   \HyField@UseFlag{Ff}{DoNotScroll}%
6016   \ifFld@comb
6017     \ifcase0\ifFld@multiline
6018       \else\ifFld@password
6019       \else\ifFld@fileselect
6020       \else 1\fi\fi\fi\relax
6021     \Hy@Error{%
6022       Field option `comb' cannot used together with\MessageBreak
6023       `multiline', `password', or `fileselect'%
6024     }\@ehc
6025   \else
6026     \HyField@UseFlag{Ff}{Comb}%
6027   \fi
6028 \fi
6029 \HyField@UseFlag{Ff}{RichText}%
6030 \HyField@PrintFlags{Ff}{text field}%
6031 \bitsetIsEmpty{HyField@Ff}{%
6032   \let\Fld@flags\ltx@empty
6033 }{%
6034   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6035 }%

```

6036 }

20.1.8 Choice fields

\HyField@FlagsChoice

```

6037 \def\HyField@FlagsChoice{%
6038   \HyField@FlagsAnnot{choice field}%
6039   \bitsetReset{HyField@Ff}%
6040   \HyField@UseFlag{Ff}{ReadOnly}%
6041   \HyField@UseFlag{Ff}{Required}%
6042   \HyField@UseFlag{Ff}{NoExport}%
6043   \HyField@UseFlag{Ff}{Combo}%
6044   \ifFld@combo
6045     \HyField@UseFlag{Ff}{Edit}%
6046   \fi
6047   \HyField@UseFlag{Ff}{Sort}%
6048   \HyField@UseFlag{Ff}{MultiSelect}%
6049   \ifFld@combo
6050     \ifFld@edit
6051       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6052     \fi
6053   \fi
6054   \HyField@UseFlag{Ff}{CommitOnSelChange}%
6055   \HyField@PrintFlags{Ff}{choice field}%
6056   \bitsetIsEmpty{HyField@Ff}{%
6057     \let\Fld@flags\ltx@empty
6058   }{%
6059     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6060   }%
6061 }
```

20.2 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.

```

6062 \def\HyField@PDFChoices#1{%
6063   \begingroup
6064   \global\let\Fld@choices\ltx@empty
6065   \let\HyTmp@optlist\ltx@empty
6066   \let\HyTmp@optitem\relax
6067   \count@=0 %
6068   \kv@parse{#1}{%
6069     \Hy@pdfstringdef\kv@key\kv@key
6070     \ifx\kv@value\relax
6071       \ifnum\Hy@pdf@majorminor@version<103 % implementation note 122, PDF spec 1.7
6072         \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
6073       \else
6074         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6075       \fi
6076     \else
6077       \Hy@pdfstringdef\kv@value\kv@value
6078       \xdef\Fld@choices{\Fld@choices[\kv@value](\kv@key)}%
6079     \fi
6080   \edef\HyTmp@optlist{%
```

```

6081 \HyTmp@optlist
6082 \HyTmp@optitem{\the\count@}{\kv@key}0%
6083 }%
6084 \advance\count@ by 1 %
6085 \@gobbletwo
6086 }%
6087 \xdef\Fld@choices{/Opt[\Fld@choices]]%
6088 \ifFld@multiselect
6089 \HyField@@PDFChoices{DV}\Fld@default
6090 \HyField@@PDFChoices{V}\Fld@value
6091 \else
6092 \ifx\Fld@default\relax
6093 \else
6094 \pdfstringdef\Hy@gtemp\Fld@default
6095 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
6096 \fi
6097 \ifx\Fld@value\relax
6098 \else
6099 \pdfstringdef\Hy@gtemp\Fld@value
6100 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
6101 \fi
6102 \fi
6103 \endgroup
6104 }

```

\HyField@@PDFChoices

```

6105 \def\HyField@@PDFChoices#1#2{%
6106 \ifx#2\relax
6107 \else
6108 \count@=0 %
6109 \def\HyTmp@optitem##1##2##3{%
6110 \def\HyTmp@key{##2}%
6111 \ifx\HyTmp@key\Hy@gtemp
6112 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6113 \HyTmp@optlist
6114 \HyTmp@optitem{##1}{##2}1%
6115 }%
6116 \let\HyTmp@found=Y%
6117 \else
6118 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6119 \HyTmp@optlist
6120 \HyTmp@optitem{##1}{##2}##3%
6121 }%
6122 \fi
6123 }%
6124 \expandafter\comma@parse\expandafter{#2}{%
6125 \pdfstringdef\Hy@gtemp\comma@entry
6126 \let\HyTmp@found=N %
6127 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6128 \HyTmp@optlist
6129 \ifx\HyTmp@found Y%
6130 \advance\count@ by 1 %
6131 \else
6132 \@onelevel@sanitize\comma@entry
6133 \PackageWarning{hyperref}{%
6134 \string\ChoiceBox: Ignoring value `\'comma@entry',%
6135 \MessageBreak
6136 it cannot be found in the choices%

```

```

6137     }%
6138     \fi
6139     \@gobble
6140 }%
6141 \def\HyTmp@optitem##1##2##3{%
6142     \ifnum##3=1 %
6143         (##2)%
6144     \fi
6145 }%
6146 \ifcase\count@
6147 \or
6148     \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6149 \else
6150     \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6151     \ifx#1V%
6152         \def\HyTmp@optitem##1##2##3{%
6153             \ifnum##3=1 %
6154                 \@firstofone{ ##1}%
6155             \fi
6156         }%
6157     \edef\HyTmp@optlist{\HyTmp@optlist}%
6158     \xdef\Fld@choices{%
6159         \Fld@choices
6160         /I[\expandafter\@firstofone\HyTmp@optlist]%
6161     }%
6162     \fi
6163 \fi
6164 \fi
6165 }

```

20.3 Forms

\HyField@SetKeys

```

6166 \def\HyField@SetKeys{%
6167     \kvsetkeys{Field}%
6168 }

6169 \newif\ifFld@checked
6170 \newif\ifFld@disabled
6171 \Fld@checkedfalse
6172 \Fld@disabledfalse
6173 \newcount\Fld@menulength
6174 \newdimen\Fld@Width
6175 \newdimen\Fld@charsize
6176 \Fld@charsize=10\p@
6177 \def\Fld@maxlen{0}
6178 \def\Fld@align{0}
6179 \def\Fld@color{0 0 0 rg}
6180 \def\Fld@bcolor{1 1 1}
6181 \def\Fld@bordercolor{1 0 0}
6182 \def\Fld@bordersep{1\p@}
6183 \def\Fld@borderwidth{1}
6184 \def\Fld@borderstyle{S}
6185 \def\Fld@cbsymbol{4}
6186 \def\Fld@radiosymbol{H}
6187 \def\Fld@rotation{0}
6188 \def\Fld@Form{\@ifnextchar[{\@Form}{\@Form[]}}

```



```

6189 \def\endForm{\@endForm}
6190 \newif\ifForm@html
6191 \Form@htmlfalse
6192 \def\Form@boolkey#1#2{%
6193   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6194 }
6195 \define@key{Form}{action}{%
6196   \hyper@normalise\Hy@DefFormAction{#1}%
6197 }
6198 \def\Hy@DefFormAction{\def\Form@action}
6199 \def\enc@@html{html}
6200 \define@key{Form}{encoding}{%
6201   \def\Hy@tempa{#1}%
6202   \ifx\Hy@tempa\enc@@html
6203     \Form@htmltrue
6204     \def\Fld@export{html}%
6205   \else
6206     \Hy@Warning{%
6207       Form `encoding' key with \MessageBreak
6208       unknown value `#1'%
6209     }%
6210     \Form@htmlfalse
6211   \fi
6212 }
6213 \define@key{Form}{method}{%
6214   \lowercase{\def\Hy@temp{#1}}%
6215   \@ifundefined{Form@method@\Hy@temp}{%
6216     \@onelevel@sanitize\Hy@temp
6217     \Hy@Error{%
6218       Unknown method `~\Hy@temp'.\MessageBreak
6219       Known values are `post' and `get'%
6220     }~\@ehc
6221   }{%
6222     \let\Form@method\Hy@temp
6223     \ifcase\@nameuse{Form@method@\Hy@temp} %
6224       \Fld@getmethodfalse
6225     \else
6226       \Fld@getmethodtrue
6227     \fi
6228   }%
6229 }
6230 \def\Form@method{}
6231 \@namedef{Form@method@post}{0}
6232 \@namedef{Form@method@get}{1}
6233 \newif\ifHyField@NeedAppearances
6234 \def\HyField@NeedAppearancesfalse{%
6235   \global\let\ifHyField@NeedAppearances\iffalse
6236 }
6237 \def\HyField@NeedAppearancetrue{%
6238   \global\let\ifHyField@NeedAppearances\iftrue
6239 }
6240 \HyField@NeedAppearancetrue
6241 \define@key{Form}{NeedAppearances}[true]{%
6242   \edef\Hy@tempa{#1}%
6243   \ifx\Hy@tempa\Hy@true
6244     \HyField@NeedAppearancetrue
6245   \else

```

```

6246 \ifx\Hy@tempa\Hy@false
6247 \HyField@NeedAppearancesfalse
6248 \else
6249 \Hy@Error{%
6250 Unexpected value `\'Hy@tempa'\MessageBreak
6251 of option `NeedAppearances' instead of\MessageBreak
6252 `true' or `false'%
6253 }\@ehc
6254 \fi
6255 \fi
6256 }
6257 \def\Field@boolkey#1#2{%
6258 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6259 }
6260 \ifHy@texht
6261 \newtoks\Field@toks
6262 \Field@toks={ }%
6263 \def\Field@addtoks#1#2{%
6264 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6265 \@processme
6266 }%
6267 \else
6268 \def\Hy@WarnHTMLFieldOption#1{%
6269 \Hy@Warning{%
6270 HTML field option `#1'\MessageBreak
6271 is ignored%
6272 }%
6273 }%
6274 \fi
6275 \def\Fld@checkequals#1=#2=#3\\{%
6276 \def\@currDisplay{#1}%
6277 \ifx\\#2\\%
6278 \def\@currValue{#1}%
6279 \else
6280 \def\@currValue{#2}%
6281 \fi
6282 \expandafter\Hy@pdfstringdef\expandafter\@currValue\expandafter{\@currValue}%
6283 }
6284 \define@key{Field}{loc}{%
6285 \def\Fld@loc{#1}%
6286 }
6287 \define@key{Field}{checked}[true]{%
6288 \lowercase{\Field@boolkey{#1}}{checked}%
6289 }
6290 \define@key{Field}{disabled}[true]{%
6291 \lowercase{\Field@boolkey{#1}}{disabled}%
6292 }
6293 \ifHy@texht
6294 \define@key{Field}{accesskey}{%
6295 \Field@addtoks{accesskey}{#1}%
6296 }%
6297 \define@key{Field}{tabkey}{%
6298 \Field@addtoks{tabkey}{#1}%
6299 }%
6300 \else
6301 \define@key{Field}{accesskey}{%
6302 \Hy@WarnHTMLFieldOption{accesskey}%

```

```

6303 }%
6304 \define@key{Field}{tabkey}{%
6305   \Hy@WarnHTMLFieldOption{tabkey}%
6306 }%
6307 \fi
6308 \define@key{Field}{name}{%
6309   \def\Fld@name{#1}%
6310 }
6311 \let\Fld@altname\relax
6312 \define@key{Field}{altname}{%
6313   \def\Fld@altname{#1}%
6314 }
6315 \let\Fld@mappingname\relax
6316 \define@key{Field}{mappingname}{%
6317   \def\Fld@mappingname{#1}%
6318 }
6319 \define@key{Field}{width}{%
6320   \def\Fld@width{#1}%
6321   \Field@Width#1\setbox0=\hbox{m}%
6322 }
6323 \define@key{Field}{maxlen}{%
6324   \def\Fld@maxlen{#1}%
6325 }
6326 \define@key{Field}{menulength}{%
6327   \Fld@menulength=#1\relax
6328 }
6329 \define@key{Field}{height}{%
6330   \def\Fld@height{#1}%
6331 }
6332 \define@key{Field}{charsize}{%
6333   \setlength{\Fld@charsize}{#1}%
6334 }
6335 \define@key{Field}{borderwidth}{%
6336   \Hy@defaultbp\Fld@borderwidth{#1}%
6337 }
6338 \def\Hy@defaultbp#1#2{%
6339   \begingroup
6340     \afterassignment\Hy@defaultbpAux
6341     \dimen@=#2bp\relax{#1}{#2}%
6342 }
6343 \begingroup\expandafter\expandafter\expandafter\endgroup
6344 \expandafter\ifx\csname dimexpr\endcsname\relax
6345   \def\Hy@defaultbpAux#1\relax#2#3{%
6346     \ifx!#1!%
6347       \endgroup
6348       \def#2{#3}%
6349     \else
6350       \dimen@=.99626\dimen@
6351       \edef\x{\endgroup
6352         \def\noexpand#2{%
6353           \strip@pt\dimen@
6354         }%
6355       }\x
6356     \fi
6357   }%
6358 \else
6359   \def\Hy@defaultbpAux#1\relax#2#3{%

```

```

6360 \ifx!#1!%
6361 \endgroup
6362 \def#2{#3}%
6363 \else
6364 \edef\x{\endgroup
6365 \def\noexpand#2{%
6366 \strip@pt\dimexpr\dimen@*800/803\relax
6367 }%
6368 }\x
6369 \fi
6370 }%
6371 \fi
6372 \define@key{Field}{borderstyle}{%
6373 \let\Hy@temp\Fld@borderstyle
6374 \def\Fld@borderstyle{#1}%
6375 \Hy@Match\Fld@borderstyle}{%
6376 ^[SDBIU]$%
6377 }{ }{%
6378 \Hy@Warning{%
6379 Invalid value `\'@pdfborderstyle'\MessageBreak
6380 for option `pdfborderstyle'. Valid values:\MessageBreak
6381 \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6382 \space\space I (Inset), U (Underline)\MessageBreak
6383 Option setting is ignored%
6384 }%
6385 \let\Fld@borderstyle\Hy@temp
6386 }%
6387 }
6388 \define@key{Field}{bordersep}{%
6389 \def\Fld@bordersep{#1}%
6390 }
6391 \define@key{Field}{default}{%
6392 \Hy@pdfstringdef\Fld@default{#1}%
6393 }
6394 \define@key{Field}{align}{%
6395 \def\Fld@align{#1}%
6396 }
6397 \define@key{Field}{value}{%
6398 \Hy@pdfstringdef\Fld@value{#1}%
6399 }
6400 \define@key{Field}{checkboxsymbol}{%
6401 \Fld@DingDef\Fld@cbsymbol{#1}%
6402 }
6403 \define@key{Field}{radiosymbol}{%
6404 \Fld@DingDef\Fld@radiosymbol{#1}%
6405 }
6406 \def\Fld@DingDef#1#2{%
6407 \let\Fld@temp\ltx@empty
6408 \Fld@@@DingDef#2\ding{ }\@nil
6409 \let#1\Fld@temp
6410 }
6411 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6412 \expandafter\def\expandafter\Fld@temp\expandafter{%
6413 \Fld@temp
6414 #1%
6415 }%
6416 \ifx\\#3\\%

```

```

6417 \expandafter\@gobble
6418 \else
6419 \begingroup
6420 \lccode`0=#2\relax
6421 \lowercase{\endgroup
6422 \expandafter\def\expandafter\Fld@temp\expandafter{%
6423 \Fld@temp
6424 0%
6425 }%
6426 }%
6427 \expandafter\@firstofone
6428 \fi
6429 {%
6430 \Fld@@DingDef#3\@nil
6431 }%
6432 }

6433 \define@key{Field}{rotation}{%
6434 \def\Fld@rotation{#1}%
6435 }

6436 \define@key{Field}{backgroundcolor}{%
6437 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6438 }
6439 \define@key{Field}{bordercolor}{%
6440 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6441 }
6442 \define@key{Field}{color}{%
6443 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6444 }

6445 \let\Fld@onclick@code\ltx@empty
6446 \let\Fld@format@code\ltx@empty
6447 \let\Fld@validate@code\ltx@empty
6448 \let\Fld@calculate@code\ltx@empty
6449 \let\Fld@keystroke@code\ltx@empty
6450 \let\Fld@onfocus@code\ltx@empty
6451 \let\Fld@onblur@code\ltx@empty
6452 \let\Fld@onmousedown@code\ltx@empty
6453 \let\Fld@onmouseup@code\ltx@empty
6454 \let\Fld@onenter@code\ltx@empty
6455 \let\Fld@onexit@code\ltx@empty
6456 \def\Hy@temp#1{%
6457 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6458 }
6459 \def\Hy@@temp#1#2{%
6460 \ifHy@pdfa
6461 \define@key{Field}{#2}{%
6462 \Hy@Error{%
6463 PDF/A: Additional action `#2' is prohibited%
6464 } \@ehc
6465 }%
6466 \else
6467 \define@key{Field}{#2}{%
6468 \def#1{##1}%
6469 }%
6470 \fi
6471 }
6472 \Hy@temp{keystroke}

```

```

6473 \Hy@temp{format}
6474 \Hy@temp{validate}
6475 \Hy@temp{calculate}
6476 \Hy@temp{onfocus}
6477 \Hy@temp{onblur}
6478 \Hy@temp{onenter}
6479 \Hy@temp{onexit}

6480 \let\Fld@calculate@sortkey\ltx@empty
6481 \define@key{Field}{calculatesortkey}[1]{%
6482   \def\Fld@calculate@sortkey{#1}%
6483 }

6484 \ifHy@texht
6485   \def\Hy@temp#1{%
6486     \define@key{Field}{#1}{%
6487       \Field@addtoks{#1}{##1}%
6488     }%
6489   }%
6490 \else
6491   \def\Hy@temp#1{%
6492     \define@key{Field}{#1}{%
6493       \Hy@WarnHTMLFieldOption{#1}%
6494     }%
6495   }%
6496 \fi
6497 \Hy@temp{ondblclick}
6498 \Hy@temp{onmousedown}
6499 \Hy@temp{onmouseup}
6500 \Hy@temp{onmouseover}
6501 \Hy@temp{onmousemove}
6502 \Hy@temp{onmouseout}
6503 \Hy@temp{onkeydown}
6504 \Hy@temp{onkeyup}
6505 \Hy@temp{onselect}
6506 \Hy@temp{onchange}
6507 \Hy@temp{onkeypress}
6508 \ifHy@texht
6509   \define@key{Field}{onclick}{%
6510     \Field@addtoks{onclick}{#1}%
6511   }%
6512 \else
6513   \ifHy@pdfa
6514     \define@key{Field}{onclick}{%
6515       \Hy@Error{%
6516         PDF/A: Action `onclick' is prohibited%
6517       }\@ehc
6518     }%
6519   \else
6520     \define@key{Field}{onclick}{%
6521       \def\Fld@onclick@code{#1}%
6522     }%
6523   \fi
6524 \fi

6525 \DeclareRobustCommand\TextField{%
6526   \@ifnextchar[{\@TextField}{\@TextField[]}%
6527 }
6528 \DeclareRobustCommand\ChoiceMenu{%

```

```

6529 \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6530 }
6531 \DeclareRobustCommand\CheckBox{%
6532 \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6533 }
6534 \DeclareRobustCommand\PushButton{%
6535 \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6536 }
6537 \DeclareRobustCommand\Gauge{%
6538 \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6539 }
6540 \DeclareRobustCommand\Submit{%
6541 \@ifnextchar[{\@Submit}{\@Submit[]}%
6542 }
6543 \DeclareRobustCommand\Reset{%
6544 \@ifnextchar[{\@Reset}{\@Reset[]}%
6545 }
6546 \def\LayoutTextField#1#2{% label, field
6547 \def\Hy@temp{#1}%
6548 \ifx\Hy@temp\@empty
6549 #2%
6550 \else
6551 #1 #2%
6552 \fi
6553 }
6554 \def\LayoutChoiceField#1#2{% label, field
6555 \def\Hy@temp{#1}%
6556 \ifx\Hy@temp\@empty
6557 #2%
6558 \else
6559 #1 #2%
6560 \fi
6561 }
6562 \def\LayoutCheckField#1#2{% label, field
6563 \def\Hy@temp{#1}%
6564 \ifx\Hy@temp\@empty
6565 #2%
6566 \else
6567 #1 #2%
6568 \fi
6569 }
6570 \def\LayoutPushButtonField#1{% button
6571 #1%
6572 }
6573 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6574 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6575 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6576 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6577 \def\MakeButtonField#1{%
6578 \sbox0{%
6579 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6580 }%
6581 \@tempdima\ht0 %
6582 \advance\@tempdima by \Fld@borderwidth bp %
6583 \advance\@tempdima by \Fld@borderwidth bp %
6584 \ht0\@tempdima
6585 \@tempdima\dp0 %

```

```

6586 \advance\@tempdima by \Fld@borderwidth bp %
6587 \advance\@tempdima by \Fld@borderwidth bp %
6588 \dp0\@tempdima
6589 \box0\relax
6590 }
6591 \def\DefaultHeightofSubmit{14pt}
6592 \def\DefaultWidthofSubmit{2cm}
6593 \def\DefaultHeightofReset{14pt}
6594 \def\DefaultWidthofReset{2cm}
6595 \def\DefaultHeightofCheckBox{\normalbaselineskip}
6596 \def\DefaultWidthofCheckBox{\normalbaselineskip}
6597 \def\DefaultHeightofChoiceMenu{\normalbaselineskip}
6598 \def\DefaultWidthofChoiceMenu{\normalbaselineskip}
6599 \def\DefaultHeightofText{\normalbaselineskip}
6600 \def\DefaultHeightofTextMultiline{4\normalbaselineskip}
6601 \def\DefaultWidthofText{3cm}
6602 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6603 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6604 \def\DefaultOptionsofPushButton{print}
6605 \def\DefaultOptionsofCheckBox{print}
6606 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6607 \def\DefaultOptionsofListBox{print}
6608 \def\DefaultOptionsofComboBox{print,edit,sort}
6609 \def\DefaultOptionsofPopdownBox{print}
6610 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6611 \ifHy@hyperfigures
6612 \Hy@Info{Hyper figures ON}%
6613 \else
6614 \Hy@Info{Hyper figures OFF}%
6615 \fi
6616 \ifHy@nesting
6617 \Hy@Info{Link nesting ON}%
6618 \else
6619 \Hy@Info{Link nesting OFF}%
6620 \fi
6621 \ifHy@hyperindex
6622 \Hy@Info{Hyper index ON}%
6623 \else
6624 \Hy@Info{Hyper index OFF}%
6625 \fi
6626 \ifHy@backref
6627 \Hy@Info{backreferencing ON}%
6628 \else
6629 \Hy@Info{backreferencing OFF}%
6630 \fi
6631 \ifHy@colorlinks
6632 \Hy@Info{Link coloring ON}%
6633 \else
6634 \Hy@Info{Link coloring OFF}%
6635 \fi
6636 \ifHy@ocgcolorlinks
6637 \Hy@Info{Link coloring with OCG ON}%

```



```

6638 \else
6639   \Hy@Info{Link coloring with OCG OFF}%
6640 \fi
6641 \ifHy@pdfa
6642   \Hy@Info{PDF/A mode ON}%
6643 \else
6644   \Hy@Info{PDF/A mode OFF}%
6645 \fi

```

22 Low-level utility macros

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

```

6646 \edef\hyper@hash{\string#}
6647 \edef\hyper@tilde{\string~}
6648 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6649 \def\@currentHref{Doc-Start}
6650 \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.

```

6651 \Hy@AtBeginDocument{%
6652   \Hy@pdfstringtrue
6653   \PDF@SetupDoc
6654   \let\PDF@SetupDoc\@empty
6655   \Hy@DisableOption{pdfpagescrop}%
6656   \Hy@DisableOption{pdfpagemode}%
6657   \Hy@DisableOption{pdfnonfullscreenpagemode}%
6658   \Hy@DisableOption{pdfdirection}%
6659   \Hy@DisableOption{pdfviewarea}%
6660   \Hy@DisableOption{pdfviewclip}%
6661   \Hy@DisableOption{pdfprintarea}%
6662   \Hy@DisableOption{pdfprintclip}%
6663   \Hy@DisableOption{pdfprintscaling}%
6664   \Hy@DisableOption{pdfduplex}%
6665   \Hy@DisableOption{pdfpicktraybypdfsize}%
6666   \Hy@DisableOption{pdfprintpagerange}%
6667   \Hy@DisableOption{pdfnumcopies}%
6668   \Hy@DisableOption{pdfstartview}%
6669   \Hy@DisableOption{pdfstartpage}%
6670   \Hy@DisableOption{pdftoolbar}%
6671   \Hy@DisableOption{pdfmenubar}%
6672   \Hy@DisableOption{pdfwindowui}%
6673   \Hy@DisableOption{pdfwindow}%
6674   \Hy@DisableOption{pdfcenterwindow}%
6675   \Hy@DisableOption{pdfdisplaydoctitle}%
6676   \Hy@DisableOption{pdfpagelayout}%
6677   \Hy@DisableOption{pdflang}%
6678   \Hy@DisableOption{baseurl}%
6679   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6680   \Hy@pdfstringfalse
6681 }

```

Ignore star from referencing macros:

```

6682 \LetLtxMacro\NoHy@OrgRef\ref
6683 \DeclareRobustCommand*{\ref}{%

```

```

6684 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6685 }
6686 \LetLtxMacro\NoHy@OrgPageRef\pageref
6687 \DeclareRobustCommand*\pageref{%
6688 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6689 }

```

23 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.

```

6690 \def\NoHyper{%
6691 \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6692 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6693 \global\let\hyper@livelink\hyper@link
6694 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6695 \let\hyper@anchor\ltx@gobble
6696 \let\hyper@anchorstart\ltx@gobble
6697 \def\hyper@anchorend{\Hy@xspace@end}%
6698 \let\hyper@linkstart\ltx@gobbletwo
6699 \def\hyper@linkend{\Hy@xspace@end}%
6700 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6701 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6702 \let\Hy@backout\@gobble
6703 }
6704 \def\stop@hyper{%
6705 \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6706 \let\Hy@backout\@gobble
6707 \let\hyper@@anchor\ltx@gobble
6708 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6709 \let\hyper@anchor\ltx@gobble
6710 \let\hyper@anchorstart\ltx@gobble
6711 \def\hyper@anchorend{\Hy@xspace@end}%
6712 \let\hyper@linkstart\ltx@gobbletwo
6713 \def\hyper@linkend{\Hy@xspace@end}%
6714 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6715 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6716 }
6717 \def\endNoHyper{%
6718 \global\let\hyper@link\hyper@livelink
6719 }
6720 \end{package}

```

24 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:

```

6721 \*nohyperref

```

```

6722 \RequirePackage{letltxmacro}[2008/06/13]
6723 \let\hyper@@anchor\@gobble
6724 \def\hyper@link#1#2#3{#3}%
6725 \let\hyper@anchorstart\@gobble
6726 \let\hyper@anchorend\@empty
6727 \let\hyper@linkstart\@gobbletwo
6728 \let\hyper@linkend\@empty
6729 \def\hyper@linkurl#1#2{#1}%
6730 \def\hyper@linkfile#1#2#3{#1}%
6731 \def\hyper@link@[#1]#2#3{#1}%
6732 \let\PDF@SetupDoc\@empty
6733 \let\PDF@FinishDoc\@empty
6734 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6735 \def\Acrobatmenu#1#2{\leavevmode#2}
6736 \let\pdfstringdefDisableCommands\@gobbletwo
6737 \let\texorpdfstring\@firstoftwo
6738 \let\pdfbookmark\@undefined
6739 \newcommand\pdfbookmark[3]{}
6740 \let\phantomsection\@empty
6741 \let\hypersetup\@gobble
6742 \let\hyperbaseurl\@gobble
6743 \newcommand*{\href}[3]{}
6744 \let\hyperdef\@gobbletwo
6745 \let\hyperlink\@gobble
6746 \let\hypertarget\@gobble
6747 \def\hyperref{%
6748   \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6749 }
6750 \long\def\@gobbleopt[#1]{}
6751 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6752 \LetLtxMacro\NoHy@OrgRef\ref
6753 \DeclareRobustCommand*\ref{%
6754   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6755 }
6756 \LetLtxMacro\NoHy@OrgPageRef\pageref
6757 \DeclareRobustCommand*\pageref{%
6758   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6759 }
6760 \let\hyperref

```

25 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}`

```

6761 (*package)
6762 \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 `\contentsline` and `\newlabel` are defined to cope with the extra arguments.

```

6763   \if@filesw
6764     \ifHy@typexml

```

```

6765 \immediate\closeout\@mainaux
6766 \immediate\openout\@mainaux\jobname.aux\relax
6767 \immediate\write\@auxout{<relaxxml>\relax}%
6768 \fi
6769 \immediate\write\@auxout{%
6770 \string\providecommand\string\HyperFirstAtBeginDocument{%
6771 \string\AtBeginDocument}^^J%
6772 \string\HyperFirstAtBeginDocument{%
6773 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6774 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6775 \string\gdef\string\contentsline%
6776 \string#1\string#2\string#3\string#4{%
6777 \string\oldcontentsline%
6778 {\string#1}{\string#2}{\string#3}}^^J%
6779 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6780 \string\gdef\string\newlabel\string#1\string#2{%
6781 \string\newlabelxx{\string#1}\string#2}^^J%
6782 \string\gdef\string\newlabelxx%
6783 \string#1\string#2\string#3\string#4\string#5\string#6{%
6784 \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.

```

6785 \string\AtEndDocument{%
6786 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6787 \string\let\string\contentsline\string\oldcontentsline^^J%
6788 \string\let\string\newlabel\string\oldnewlabel^^J%
6789 \string\fi%
6790 }^^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.

```

6791 \string\fi%
6792 }^^J%
6793 \string\global\string\let\string\hyper@last\relax^^J%
6794 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6795 }%
6796 \fi
6797 \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. If it was not used, or an old version of hyperref was used, don't use that TOC at all but generate a warning. Not ideal, but better than failing with pre-5.0 hyperref TOCs.

```

6798 \ifx\hyper@last\@undefined
6799 \def\@starttoc#1{%
6800 \begingroup
6801 \makeatletter
6802 \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6803 \IfFileExists{\jobname.#1}{%
6804 \Hy@WarningNoLine{%
6805 old #1 file detected, not used; run LaTeX again%
6806 }%
6807 }{}%
6808 \if@files
6809 \expandafter\newwrite\csname tf@#1\endcsname
6810 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax

```

```

6811     \fi
6812     \@nobeakfalse
6813   \endgroup
6814 }%
6815 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
6816 \fi
6817 }

```

26 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`.

```

6818 \ifHy@pdfusetitle
6819   \let\HyOrg@title\title
6820   \let\HyOrg@author\author
6821   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6822   \def\Hy@scanopttitle[#1]{%
6823     \gdef\Hy@title{#1}%
6824     \HyOrg@title[{#1}]%
6825   }%
6826   \def\Hy@scantitle#1{%
6827     \gdef\Hy@title{#1}%
6828     \HyOrg@title{#1}%
6829   }%
6830   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6831   \def\Hy@scanoptauthor[#1]{%
6832     \gdef\Hy@author{#1}%
6833     \HyOrg@author[{#1}]%
6834   }%
6835   \def\Hy@scanauthor#1{%
6836     \gdef\Hy@author{#1}%
6837     \HyOrg@author{#1}%
6838   }%

```

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.

```

6839 \begingroup
6840   \def\process@me#1\@nil#2{%
6841     \expandafter\let\expandafter\x\csname @#2\endcsname
6842     \edef\y{\expandafter\strip@prefix\meaning\x}%
6843     \def\c##1##2\@nil{%
6844       \ifx\##1\%
6845         \else
6846           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6847             \expandafter{\x}%
6848         \fi
6849       }%
6850     \expandafter\c\y\relax#1\@nil
6851   }%
6852   \expandafter\process@me\string\@latex@\@nil{title}%
6853   \expandafter\process@me\string\@latex@\@nil{author}%
6854 \endgroup
6855 \fi
6856 \Hy@DisableOption{pdfusetitle}

```

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

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

In the macro `\author` the newline can perhaps separate the different authors, so the newline expands here to a comma with space.

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

A possible ¹ removes its argument.

```

6857 \def\Hy@UseMaketitleString#1{%
6858   \ltx@ifundefined{Hy@#1}{-}%
6859   \begingroup
6860     \let\Hy@saved@hook\pdfstringdefPreHook
6861     \pdfstringdefDisableCommands{%
6862       \expandafter\let\expandafter\\csname Hy@newline@#1\endcsname
6863       \let\newline\\%
6864       \def\and{; }%
6865       \let\thanks\@gobble%
6866     }%
6867     \expandafter\ifx\csname @pdf#1\endcsname\@empty
6868     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6869       \csname Hy@#1\endcsname\@empty
6870     }%
6871     \fi
6872     \global\let\pdfstringdefPreHook\Hy@saved@hook
6873   \endgroup
6874 }%
6875 }
6876 \def\Hy@newline@title#1{ #1}
6877 \def\Hy@newline@author#1{, #1}
6878 \def\Hy@UseMaketitleInfos{%
6879   \Hy@UseMaketitleString{title}%
6880   \Hy@UseMaketitleString{author}%
6881 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6882 \RequirePackage{atbegshi}[2007/09/09]
6883 \let\Hy@EveryPageHook\ltx@empty
6884 \let\Hy@EveryPageBoxHook\ltx@empty
6885 \let\Hy@FirstPageHook\ltx@empty
6886 \AtBeginShipout{%
6887   \Hy@EveryPageHook
6888   \ifx\Hy@EveryPageBoxHook\ltx@empty
6889   \else
6890     \setbox\AtBeginShipoutBox=\vbox{%
6891       \offinterlineskip
6892       \Hy@EveryPageBoxHook
6893       \box\AtBeginShipoutBox

```

```

6894 }%
6895 \fi
6896 }
6897 \ltx@iffileloaded{hpdf.tex.def}{%
6898 \AtBeginShipout{%
6899 \Hy@FirstPageHook
6900 \global\let\Hy@FirstPageHook\ltx@empty
6901 }%
6902 }{%
6903 \AtBeginShipoutFirst{%
6904 \Hy@FirstPageHook
6905 }%
6906 }
6907 \g@addto@macro\Hy@FirstPageHook{%
6908 \PDF@FinishDoc
6909 \global\let\PDF@FinishDoc\ltx@empty
6910 }

```

28.1 PDF /PageLabels

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

```

6911 \ifHy@pdfpagelabels
6912 \begingroup\expandafter\expandafter\expandafter\endgroup
6913 \expandafter\ifx\csname thepage\endcsname\relax
6914 \Hy@pdfpagelabelsfalse
6915 \Hy@WarningNoLine{%
6916 Option `pdfpagelabels' is turned off\MessageBreak
6917 because \string\thepage\space is undefined%
6918 }%
6919 \csname fi\endcsname
6920 \csname iffalse\expandafter\endcsname
6921 \fi

```

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

```

6922 \def\thispdfpagelabel#1{%
6923 \gdef\HyPL@thisLabel{#1}%
6924 }%
6925 \global\let\HyPL@thisLabel\relax

```

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

```

6926 \let\HyPL@Labels\ltx@empty

```

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

```

6927 \newcount\Hy@abspage
6928 \Hy@abspage=0 %

```

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

```

6929 \def\HyPL@LastType{init}%
6930 \def\HyPL@LastNumber{0}%
6931 \let\HyPL@LastPrefix\ltx@empty

```

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

```

6932 \def\HyPL@arabic{D}%
6933 \def\HyPL@Roman{R}%
6934 \def\HyPL@roman{r}%
6935 \def\HyPL@Alph{A}%
6936 \def\HyPL@alph{a}%

```

```

6937 \let\HyPL@SlidesSetPage\ltx@empty
6938 \ltx@ifclassloaded{slides}{%
6939   \def\HyPL@SlidesSetPage{%
6940     \advance\c@page\ltx@one
6941     \ifnum\value{page}>\ltx@one
6942       \protected@edef\HyPL@SlidesOptionalPage{%
6943         \Hy@SlidesFormatOptionalPage{thepage}%
6944       }%
6945     \else
6946       \let\HyPL@SlidesOptionalPage\ltx@empty
6947     \fi
6948     \advance\c@page-\ltx@one
6949   \def\HyPL@page{%
6950     \csname the\Hy@SlidesPage\endcsname
6951     \HyPL@SlidesOptionalPage
6952   }%
6953 }%
6954 }{}%

```

`\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.

```

6955 \def\HyPL@EveryPage{%
6956   \begingroup
6957   \ifx\HyPL@thisLabel\relax
6958     \let\HyPL@page\thepage
6959     \HyPL@SlidesSetPage
6960   \else
6961     \let\HyPL@page\HyPL@thisLabel
6962     \global\let\HyPL@thisLabel\relax
6963   \fi
6964   \let\HyPL@Type\relax
6965   \ifnum\c@page>0 %
6966     \ifx\HyPL@SlidesSetPage\ltx@empty
6967       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6968     \fi
6969   \fi
6970   \let\Hy@temp Y%
6971   \ifx\HyPL@Type\HyPL@LastType
6972   \else
6973     \let\Hy@temp N%
6974   \fi
6975   \ifx\HyPL@Type\relax
6976     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6977   \else
6978     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6979   \fi
6980   \ifx\HyPL@Prefix\HyPL@LastPrefix
6981   \else
6982     \let\Hy@temp N%
6983   \fi
6984   \if Y\Hy@temp
6985     \advance\c@page by -1 %
6986     \ifnum\HyPL@LastNumber=\the\c@page\relax
6987     \else
6988       \let\Hy@temp N%
6989     \fi
6990     \Hy@StepCount\c@page

```



```

6991 \fi
6992 \if N\Hy@temp
6993 \ifx\HyPL@Type\relax
6994 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6995 \else
6996 \HyPL@StorePageLabel{%
6997 \ifx\HyPL@Prefix\@empty
6998 \else
6999 /P(\HyPL@Prefix)%
7000 \fi
7001 /S/\csname HyPL\HyPL@Type\endcsname
7002 \ifnum\the\c@page=1 %
7003 \else
7004 \space/St \the\c@page
7005 \fi
7006 }%
7007 \fi
7008 \fi
7009 \xdef\HyPL@LastNumber{\the\c@page}%
7010 \global\let\HyPL@LastType\HyPL@Type
7011 \global\let\HyPL@LastPrefix\HyPL@Prefix
7012 \endgroup
7013 \Hy@GlobalStepCount\Hy@abspage
7014 }%

```

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

```

7015 \def\HyPL@CheckThePage#1\@nil{%
7016 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
7017 }%

```

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

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

```

7018 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
7019 \def\Hy@tempa{#4}%
7020 \def\Hy@tempb{\csname\endcsname\c@page}%
7021 \ifx\Hy@tempa\Hy@tempb
7022 \expandafter\ifx\csname HyPL#3\endcsname\relax
7023 \else
7024 \def\HyPL@Type{#3}%
7025 \def\HyPL@Prefix{#2}%
7026 \fi
7027 \else
7028 \begingroup
7029 \let\Hy@next\endgroup
7030 \let\HyPL@found\@undefined
7031 \def\arabic{\HyPL@Format{arabic}}%
7032 \def\Roman{\HyPL@Format{Roman}}%
7033 \def\roman{\HyPL@Format{roman}}%
7034 \def\Alph{\HyPL@Format{Alph}}%
7035 \def\alph{\HyPL@Format{alph}}%
7036 \protected@edef\Hy@temp{#1}%
7037 \ifx\HyPL@found\relax
7038 \toks@{\expandafter\Hy@temp}%
7039 \edef\Hy@next{\endgroup

```

```

7040      \noexpand\HyPL@@@CheckThePage\the\toks@
7041      \noexpand\HyPL@found\relax\noexpand\@nil
7042    }%
7043  \fi
7044  \Hy@next
7045  \fi
7046 }%

```

\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**.

```

7047 \def\HyPL@Format#1#2{%
7048   \ifx\HyPL@found\@undefined
7049     \expandafter\ifx\csname c@#2\endcsname\c@page
7050       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
7051     \else
7052       \expandafter\noexpand\csname#1\endcsname{#2}%
7053     \fi
7054   \else
7055     \expandafter\noexpand\csname#1\endcsname{#2}%
7056   \fi
7057 }%

```

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

```

7058 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
7059   \def\Hy@tempa{#3}%
7060   \def\Hy@tempb{\HyPL@found\relax}%
7061   \ifx\Hy@tempa\Hy@tempb
7062     \def\HyPL@Type{#2}%
7063     \def\HyPL@Prefix{#1}%
7064   \fi
7065 }%

```

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

```

7066 \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**.

```

7067 \def\HyPL@Useless{0<</S/D>>}%
7068 \@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.

```

7069 \def\HyPL@SetPageLabels{%
7070   \@onelevel@sanitize\HyPL@Labels
7071   \ifx\HyPL@Labels\@empty
7072   \else
7073     \ifx\HyPL@Labels\HyPL@Useless
7074     \else
7075       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
7076     \fi
7077   \fi
7078 }%

```

```

7079 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
7080 \fi

```

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

```

7081 \Hy@DisableOption{pdfpagelabels}
7082 \</package>

```

28.1.1 pdfTeX and VTeX

Because of pdfTeX’s `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```

7083 \< *pdftex>
7084 \pdf@ifdraftmode{%
7085   \let\Hy@PutCatalog\ltx@gobble
7086 }{%
7087   \let\Hy@PutCatalog\pdfcatalog
7088 }
7089 \< /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.

```

7090 \< *vtex>
7091 \providecommand*\XR@ext}{pdf}
7092 \edef\Hy@VTeXversion{%
7093   \ifx\VTeXversion\@undefined
7094     \z@
7095   \else
7096     \ifx\VTeXversion\relax
7097       \z@
7098     \else
7099       \VTeXversion
7100     \fi
7101   \fi
7102 }
7103 \begingroup
7104   \ifnum\Hy@VTeXversion<660 %
7105     \gdef\Hy@PutCatalog#1{%
7106       \Hy@WarningNoLine{%
7107         VTeX 6.59g or above required for pdfpagelabels%
7108       }%
7109     }%
7110   \else
7111     \gdef\Hy@PutCatalog#1{%
7112       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7113     }%
7114     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7115       \ifx\#2\%
7116         \else
7117           \immediate\special{!pdfpagelabels #2}%
7118         \fi
7119       }%
7120     \fi

```

```

7121 \endgroup
7122 </vtex>

7123 <*pdftex | vtex>

```

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

```

7124 \ifHy@pdfpagelabels
7125   \def\HyPL@StorePageLabel#1{%
7126     \toks@{\expandafter{\HyPL@Labels}}%
7127     \xdef\HyPL@Labels{%
7128       \the\toks@
7129       \the\Hy@abspage<<#1>>%
7130     }%
7131   }%

```

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.

```

7132 \RequirePackage{atveryend}[2009/12/07]%
7133 \AtVeryEndDocument{%
7134   \HyPL@SetPageLabels
7135 }%

7136 \fi
7137 </pdftex | vtex>

```

28.1.2 xetex

```

7138 <*xetex>
7139 \HyPsd@LoadUnicode
7140 \Hy@unicodetrue
7141 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7142 \else
7143   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7144 \fi
7145 \HyPsd@LoadStringEnc
7146 \define@key{Hyp}{unicode}[true]{%
7147   \Hy@boolkey{unicode}{#1}%
7148   \ifHy@unicode
7149     \else
7150       \Hy@Warning{%
7151         XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
7152         option setting `unicode=false'%
7153       }%
7154       \Hy@unicodetrue
7155     \fi
7156   }
7157 \define@key{Hyp}{pdfencoding}{%
7158   \edef\HyPsd@temp{#1}%
7159   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7160     \let\HyPsd@pdfencoding\HyPsd@temp
7161   \else
7162     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7163       \let\HyPsd@pdfencoding\HyPsd@temp
7164     \else
7165       \Hy@Warning{%
7166         XeTeX driver only supports\MessageBreak
7167         `pdfencoding=unicode|auto'. Ignoring option\MessageBreak

```

```

7168     setting `pdfencoding=\HyPsd@temp'%
7169   }%
7170   \fi
7171 \fi
7172 }
7173 \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:

```

7174 \def\setpdfinkmargin#1{%
7175   \begingroup
7176   \setlength{\dimen@}{#1}%
7177   \special{dvipdfmx:config g \strip@pt\dimen@}%
7178   \endgroup}
7179 \</xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

7180 \<pdfmarkbase>
7181 \begingroup
7182 \@ifundefined{headerps@out}{-}{%
7183   \toks@{\expandafter\Hy@FirstPageHook}%
7184   \xdef\Hy@FirstPageHook{%
7185     \noexpand\headerps@out{%
7186       systemdict /pdfmark known%
7187       {%
7188         userdict /?pdfmark systemdict /exec get put%
7189       }{%
7190         userdict /?pdfmark systemdict /pop get put %
7191         userdict /pdfmark systemdict /cleartomark get put%
7192       }%
7193     }%
7194   }%
7195   \the\toks@
7196 }%
7197 }%
7198 \endgroup
7199 \</pdfmarkbase>

```

\Hy@PutCatalog

```

7200 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
7201 \<pdfmarkbase>
7202 \def\Hy@PutCatalog#1{%
7203   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7204 }
7205 \</pdfmarkbase>

7206 \<pdfmarkbase | dvipdfm | xetex>
7207 \ifHy@pdfpagelabels

```

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

```

7208 \def\HyPL@StorePageLabel#1{%
7209   \if@filesw
7210     \begingroup
7211     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7212     \immediate\write\@mainaux{%
7213       \string\HyPL@Entry{\Hy@tempa}%
7214     }%
7215     \endgroup

```

```

7216 \fi
7217 }%

```

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.

```

7218 \Hy@AtBeginDocument{%
7219 \if@filesw
7220 \immediate\write\@mainaux{%
7221 \string\providecommand\string*\string\HyPL@Entry[1]{}%
7222 }%
7223 \fi
7224 \ifx\HyPL@Labels\@empty
7225 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7226 \else
7227 \HyPL@SetPageLabels
7228 \fi
7229 \let\HyPL@Entry\@gobble
7230 }%

```

`\HyPL@Entry`

```

7231 \def\HyPL@Entry#1{%
7232 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7233 \HyPL@Labels
7234 #1%
7235 }%
7236 }%

7237 \fi
7238 </pdfmarkbase | dvipdfm | xetex>
7239 <*package>

7240 \ifx\MaybeStopEarly\relax
7241 \else
7242 \Hy@stoppedearlytrue
7243 \expandafter\MaybeStopEarly
7244 \fi
7245 \Hy@stoppedearlyfalse

```

29 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

```

7246 \def\Hy@CounterExists#1{%
7247   \begingroup\expandafter\expandafter\expandafter\endgroup
7248   \expandafter\ifx\csname c@#1\endcsname\relax
7249     \expandafter\@gobble
7250   \else
7251     \begingroup\expandafter\expandafter\expandafter\endgroup
7252     \expandafter\ifx\csname the#1\endcsname\relax
7253       \expandafter\expandafter\expandafter\@gobble
7254     \else
7255       \expandafter\expandafter\expandafter\@firstofone
7256     \fi
7257   \fi
7258 }
7259 \Hy@CounterExists{section}{%
7260   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7261 }
7262 \Hy@CounterExists{part}{%
7263   \providecommand\theHpart{\arabic{part}}}%
7264 }
7265 \ltx@ifundefined{thechapter}{%
7266   \providecommand\theHsection   {\arabic{section}}}%
7267   \providecommand\theHfigure    {\arabic{figure}}}%
7268   \providecommand\theHtable     {\arabic{table}}}%
7269 }{%
7270   \providecommand\theHchapter   {\arabic{chapter}}}%
7271   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}}%
7272   \providecommand\theHtable     {\theHchapter.\arabic{table}}}%
7273   \providecommand\theHsection   {\theHchapter.\arabic{section}}}%
7274 }
7275 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
7276 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7277 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
7278 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7279 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
7280 \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.

7281 \let\H@item\item
7282 \newcounter{Item}
7283 \def\theHItem{\arabic{Item}}
7284 \def\item{%
7285   \@hyper@itemfalse
7286   \if@nmbrlist\@hyper@itemtrue\fi
7287   \H@item
7288 }

7289 \providecommand\theHenumi   {\theHItem}
7290 \providecommand\theHenumii  {\theHItem}
7291 \providecommand\theHenumiii {\theHItem}
7292 \providecommand\theHenumiv  {\theHItem}
7293 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7294 \providecommand\theHmpfootnote {\arabic{mpfootnote}}
7295 \@ifundefined{theHHmpfootnote}{%

```

```

7296 \let\theHHmpfootnote\theHHfootnote
7297 }{}

```

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.

```

7298 \let\H@refstepcounter\refstepcounter
7299 \edef\name@of@eq{equation}%
7300 \edef\name@of@slide{slide}%

```

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.

```

7301 \newif\if@hyper@item
7302 \newif\if@skiphyperref
7303 \@hyper@itemfalse
7304 \@skiphyperreffalse
7305 \def\refstepcounter#1{%
7306   \ifHy@pdfstring
7307   \else
7308     \H@refstepcounter{#1}%
7309     \edef\This@name{#1}%
7310     \ifx\This@name\name@of@slide
7311     \else
7312       \if@skiphyperref
7313       \else
7314         \if@hyper@item
7315         \stepcounter{Item}%
7316         \hyper@refstepcounter{Item}%
7317         \@hyper@itemfalse
7318       \else
7319         \hyper@refstepcounter{#1}%
7320       \fi
7321     \fi
7322   \fi
7323 \fi
7324 }
7325 \let\Hy@saved@refstepcounter\refstepcounter

```

AMSI_{TEX} 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.

```

7326 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7327 \def\hyper@refstepcounter#1{%
7328   \edef\This@name{#1}%
7329   \ifx\This@name\name@of@eq
7330   \@ifundefined{theHequation}{%
7331     \make@stripped@name{\theequation}%
7332     \let\theHequation\newname
7333   }{}%
7334   \fi
7335   \HyCnt@ProvideTheHCounter{#1}%
7336   \hyper@makecurrent{#1}%
7337   \ifmeasuring@
7338   \else
7339     \Hy@raisedlink{%

```



```

7340 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7341 }%
7342 \fi
7343 }

```

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

```

7344 \def\HyCnt@ProvideTheHCounter#1{%
7345 \ifundefined{theH#1}{%
7346 \expandafter\def\csname theH#1\endcsname{}%
7347 \def\Hy@temp{\@elt{#1}}%
7348 \ltx@onelevel@sanitize\Hy@temp
7349 \let\HyOrg@elt\@elt
7350 \edef\@elt{%
7351 \noexpand\HyCnt@LookForParentCounter
7352 \expandafter\noexpand\csname theH#1\endcsname
7353 }%
7354 \cl@ckpt
7355 \let\@elt\HyOrg@elt
7356 \expandafter
7357 \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
7358 \expandafter{%
7359 \expandafter\@arabic\csname c@#1\endcsname
7360 }%
7361 }}%
7362 }

```

`\Hy@LookForParentCounter`

```

7363 \def\HyCnt@LookForParentCounter#1#2{%
7364 \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7365 \ltx@ifundefined{cl@#2}{%
7366 }{%
7367 \ltx@onelevel@sanitize\Hy@temp@A
7368 \edef\Hy@temp@A{%
7369 \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7370 }\Hy@temp@A
7371 \ifin@
7372 \ltx@ifundefined{theH#2}{%
7373 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7374 \expandafter{%
7375 \expandafter\@arabic\csname c@#2\endcsname.%
7376 }%
7377 }{%
7378 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7379 \expandafter{%
7380 \csname theH#2\endcsname.%
7381 }%
7382 }%
7383 \fi
7384 }%
7385 }

```

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`.

```

7386 \begingroup\expandafter\expandafter\expandafter\endgroup
7387 \expandafter\ifx\csname chapter\endcsname\relax
7388   \def\Hy@chapterstring{section}%
7389 \else
7390   \def\Hy@chapterstring{chapter}%
7391 \fi
7392 \def\Hy@appendixstring{appendix}
7393 \def\Hy@chapapp{\Hy@chapterstring}
7394 \ltx@ifundefined{appendix}{%
7395 }{%
7396   \let\HyOrg@appendix\appendix
7397   \def\Hy@AlphNoErr#1{%
7398     \ifnum\value{#1}>26 %
7399       Alph\number\value{#1}%
7400     \else
7401       \ifnum\value{#1}<1 %
7402         Alph\number\value{#1}%
7403       \else
7404         \Alph{#1}%
7405       \fi
7406     \fi
7407   }%
7408   \def\appendix{%
7409     \ltx@ifundefined{chapter}{%
7410       \gdef\theHsection{\Hy@AlphNoErr{section}}}%
7411     }{%
7412       \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
7413     }%
7414     \xdef\Hy@chapapp{\Hy@appendixstring}%
7415     \HyOrg@appendix
7416   }%
7417 }
```

`\Hy@Test@alph`

```

7418 \def\Hy@Test@alph#1{%
7419   \ifcase#1\or
7420     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7421     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7422     u\or v\or w\or x\or y\or z%
7423   \else
7424     \@ctrerr
7425   \fi
7426 }
```

`\Hy@Test@Alph`

```

7427 \def\Hy@Test@Alph#1{%
7428   \ifcase#1\or
7429     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7430     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7431     U\or V\or W\or X\or Y\or Z%
7432   \else
```

```

7433 \ctrerr
7434 \fi
7435 }

```

\hyper@makecurrent Because of Babel mucking around, nullify \textlatin when making names. And \@number because of babel's lrbabel.def.

```

7436 \def\hyper@makecurrent#1{%
7437 \begingroup
7438 \Hy@safe@activetrue
7439 \edef\Hy@param{#1}%
7440 \ifx\Hy@param\Hy@chapterstring
7441 \let\Hy@param\Hy@chapapp
7442 \fi
7443 \ifHy@hypertextnames
7444 \let\@number\@firstofone
7445 \def\@fnsymbol##1{fnsymbol\number##1}%
7446 \def\@arabic##1{\number##1}%
7447 \ifx\@alph\Hy@Test@alph
7448 \else
7449 \def\@alph{alph\number}%
7450 \fi
7451 \ifx\@Alph\Hy@Test@Alph
7452 \else
7453 \def\@Alph{Alph\number}%
7454 \fi
7455 \ifHy@naturalnames
7456 \let\textlatin\@firstofone
7457 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7458 \else
7459 \xdef\HyperGlobalCurrentHref{%
7460 \csname
7461 the%
7462 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7463 #1%
7464 \endcsname
7465 }%
7466 \fi
7467 \xdef\HyperGlobalCurrentHref{%
7468 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7469 }%
7470 \else
7471 \Hy@GlobalStepCount\Hy@linkcounter
7472 \xdef\HyperGlobalCurrentHref{\Hy@param.the\Hy@linkcounter}%
7473 \fi
7474 \endgroup
7475 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7476 \ifHy@localanchorname
7477 \let\@currentHref\HyperLocalCurrentHref
7478 \else
7479 \global\let\@currentHref\HyperGlobalCurrentHref
7480 \fi
7481 }

```

\Hy@MakeCurrentHref

```

7482 \def\Hy@MakeCurrentHref#1{%
7483 \edef\HyperLocalCurrentHref{#1}%
7484 \@onelevel@sanitize\HyperLocalCurrentHref

```

```

7485 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7486 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7487 \ifHy@localanchorname
7488   \let\@currentHref\HyperLocalCurrentHref
7489 \else
7490   \global\let\@currentHref\HyperGlobalCurrentHref
7491 \fi
7492 }

```

`\Hy@MakeCurrentHrefAuto`

```

7493 \def\Hy@MakeCurrentHrefAuto#1{%
7494   \Hy@GlobalStepCount\Hy@linkcounter
7495   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7496 }

```

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

```

7497 \def\@currentHlabel{\@currentHref}

7498 \ifpackageloaded{fancyvrb}{%
7499   \@ifpackagelater{fancyvrb}{1998/05/20}{%}{%
7500     \def\FV@StepLineNo{%
7501       \FV@SetLineNo
7502       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7503       \FV@StepLineNo
7504     }%
7505   }%
7506 }{}

```

30 Package lastpage support

Package `lastpage` directly writes the `\newlabel` command to the aux file. Because package `hyperref` requires additional arguments, the internal command `\lastpage@putlabel` is redefined. The patch is deferred by `\AtBeginDocument`, because it is possible that package `lastpage` is loaded after package `hyperref`. The same algorithm (options `hypertextnames` and `plainpages`) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 39). The link will not work if option `pageanchor` is set to false.

`\lastpage@putlabel`

```

7507 \Hy@AtBeginDocument{%
7508   \ifclassloaded{revtex4}{%
7509     \@namedef{ver@lastpage.sty}{1994/06/25}%
7510   }{}%
7511   \@ifpackageloaded{lastpage}{%
7512     \ifHy@pageanchor
7513     \else
7514       \Hy@WarningNoLine{%
7515         The \string\pageref{LastPage} link doesn't work\MessageBreak
7516         with disabled option `pageanchor'%
7517       }%
7518     \fi
7519     \def\lastpage@putlabel{%
7520       \addtocounter{page}{-1}%
7521       \if@filesw
7522         \begingroup
7523         \let\@number\@firstofone

```

```

7524 \ifHy@pageanchor
7525 \ifHy@hypertextnames
7526 \ifHy@plainpages
7527 \def\Hy@temp{\arabic{page}}%
7528 \else
7529 \Hy@unicodedefalse
7530 \pdfstringdef\Hy@temp{\thepage}%
7531 \fi
7532 \else
7533 \def\Hy@temp{\the\Hy@pagecounter}%
7534 \fi
7535 \fi
7536 \immediate\write\@auxout{%
7537 \string\newlabel
7538 {LastPage}{\thepage}{\thepage}%
7539 \ifHy@pageanchor page.\Hy@temp\fi}{}}%
7540 }%
7541 \endgroup
7542 \fi
7543 \addtocounter{page}{1}%
7544 }%
7545 \@ifclassloaded{revtex4}{%
7546 \begingroup
7547 \toks@{\expandafter{\lastpage@putlabel}}%
7548 \edef\x{\endgroup
7549 \def\noexpand\lastpage@putlabel{%
7550 \noexpand\stepcounter{page}%
7551 \the\toks@
7552 \noexpand\addtocounter{page}\noexpand\m@ne
7553 }%
7554 }%
7555 \x
7556 }{}%
7557 }{}%
7558 }
7559 \end{package}
7560 \check
7561 \checkpackage{lastpage}[1994/06/25]
7562 \checkcommand\def\lastpage@putlabel{%
7563 \addtocounter{page}{-1}%
7564 \immediate\write\@auxout{%
7565 \string\newlabel{LastPage}{\thepage}{\thepage}%
7566 }%
7567 \addtocounter{page}{1}%
7568 }
7569 \end{check}
7570 \end{package}

```

31 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.

```

7571 \def\hypergetref#1{\getrefbykeydefault{#1}{}}
7572 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}

```

32 Package titlesec and titletoc support

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

Package titlesec support:

```
7573 \@ifpackageloaded{titlesec}{%
7574   \def\ttl@Hy@steplink#1{%
7575     \Hy@MakeCurrentHrefAuto{#1*}%
7576     \edef\ttl@Hy@saveanchor{%
7577       \noexpand\Hy@raisedlink{%
7578         \noexpand\hyper@anchorstart{\@currentHref}%
7579         \noexpand\hyper@anchorend
7580       \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7581       \noexpand\ttl@Hy@PatchSaveWrite
7582     }%
7583   }%
7584 }%
7585 \def\ttl@Hy@PatchSaveWrite{%
7586   \begingroup
7587   \toks@{\expandafter\ttl@savewrite}%
7588   \edef\x{\endgroup
7589     \def\noexpand\ttl@savewrite{%
7590       \let\noexpand\@currentHref
7591       \noexpand\ttl@Hy@SavedCurrentHref
7592       \the\toks@
7593     }%
7594   }%
7595   \x
7596 }%
7597 \def\ttl@Hy@refstepcounter#1{%
7598   \let\ttl@b\Hy@raisedlink
7599   \def\Hy@raisedlink##1{%
7600     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7601   }%
7602   \refstepcounter{#1}%
7603   \let\Hy@raisedlink\ttl@b
7604 }%
7605 }
```

Package titletoc support:

```
7606 \@ifpackageloaded{titletoc}{%
7607   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7608 }
```

33 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net).

```
7609 \AtBeginDocument{%
7610   \def\Hy@varioref@undefined{{?}{?}{?}{?}}
7611   \@ifpackageloaded{varioref}{%
7612     \def\vref@pagenum#1#2{%
7613       \@ifundefined{r@#2}{%
7614         \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7615       }{}%
7616       \edef#1{\getpagerefnumber{#2}}%
7617     }%
```

```
7618 }{}
```

Package varioref redefines `\refstepcounter`, thus it needs fixing, if the package is loaded *after* `hyperref`.

```
7619 \def\Hy@varioref@refstepcounter#1{%
7620   \stepcounter{#1}%
7621   \protected@edef\@currentlabel{%
7622     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7623   }%
7624 }
7625 \ifx\refstepcounter\Hy@varioref@refstepcounter
7626   \let\H@refstepcounter\refstepcounter
7627   \let\refstepcounter\Hy@saved@refstepcounter
7628 \fi
7629 }
```

34 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

```
7630 \@ifpackageloaded{longtable}{%
7631   \begingroup
7632   \def\y{\LT@array}%
7633   \@ifundefined{scr@LT@array}{%
7634     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7635   }{\def\y{\scr@LT@array}}%
7636   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7637     \expandafter\endgroup
7638     \expandafter\def\y[#1]#2{%
7639       \H@refstepcounter{#1}%
7640       \hyper@makecurrent{table}%
7641       \let\Hy@LT@currentHref\@currentHref
7642       #2\@sharp###4%
7643     }%
7644   }%
7645   \expandafter\expandafter\expandafter\x\y[#1]{#2}\@nil
```

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

```
7646   \begingroup
7647   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7648     \endgroup
7649     \def\LT@start{%
7650       #1%
7651       \ifvoid\LT@foot#2\fi
7652       \let\@currentHref\Hy@LT@currentHref
7653       \Hy@raisedlink{%
7654         \hyper@anchorstart{\@currentHref}\hyper@anchorend
7655       }%
7656       #3%
7657     }%
7658   }%
7659   \expandafter\x\LT@start\@nil
7660 }{}
```

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

```

7661 \let\new@refstepcounter\refstepcounter
7662 \let\H@equation\equation
7663 \let\H@endequation\endequation

7664 \@ifpackageloaded{amsmath}{%
7665   \long\def\Hy@temp{%
7666     \incr@eqnum
7667     \mathdisplay@push
7668     \st@rredfalse \global\@eqnswtrue
7669     \mathdisplay{equation}%
7670   }%
7671   \ifx\Hy@temp\equation
7672     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7673       \csname iftrue\endcsname
7674   \else
7675     \long\def\equation{%
7676       \mathdisplay@push
7677       \st@rredfalse \global\@eqnswtrue
7678       \mathdisplay{equation}%
7679       \incr@eqnum
7680     }%
7681   \fi
7682 \fi
7683 }{%
7684 \def\equation{%
7685   \let\refstepcounter\H@refstepcounter
7686   \H@equation
7687   \@ifundefined{theHequation}{%
7688     \make@stripped@name{\theequation}%
7689     \let\theHequation\newname
7690   }{%
7691     \hyper@makecurrent{equation}%

```

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

```

7692   \mathopen{%
7693     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
7694   }%
7695   \let\refstepcounter\new@refstepcounter
7696 }%
7697 \def\endequation{%
7698   \ifx\Hy@raisedlink\ltx@empty
7699     \hyper@anchorend
7700   \else
7701     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7702   \fi
7703   \H@endequation
7704 }%
7705 }

```

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.

```

7706 \newif\if@eqnstar
7707 \@eqnstarfalse
7708 \let\H@eqnarray\eqnarray
7709 \let\H@endeqnarray\endeqnarray
7710 \def\eqnarray{%
7711   \let\Hy@reserved@a\relax
7712   \def\@currentHref{%
7713     \H@eqnarray
7714     \if@eqnstar
7715     \else
7716       \ifx\@currentHref\%
7717       \else
7718         \ifundefined{theHequation}{%
7719           \make@stripped@name{theequation}%
7720           \let\theHequation\newname
7721         }{%
7722           \hyper@makecurrent{equation}%
7723           \mathopen{%
7724             \Hy@raisedlink{%
7725               \hyper@anchorstart{\@currentHref}\hyper@anchorend
7726             }%
7727           }%
7728         \fi
7729       \fi
7730   }
7731 \def\endeqnarray{%
7732   \H@endeqnarray
7733 }
```

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.

```

7734 \@namedef{eqnarray*}{%
7735   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7736 }
7737 \@namedef{endeqnarray*}{%
7738   \nonumber\endeqnarray\@eqnstarfalse
7739 }
```

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

```

7740 \ltx@ifundefined{subeqnarray}{-}{%
7741   \let\H@subeqnarray\subeqnarray
7742   \let\H@endsubeqnarray\endsubeqnarray
7743   \def\subeqnarray{%
7744     \let\Hy@reserved@a\relax
7745     \H@subeqnarray
7746     \ifundefined{theHequation}{%
7747       \make@stripped@name{theequation}%
7748       \let\theHequation\newname
7749     }{%
7750       \hyper@makecurrent{equation}%
7751       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7752     }%
7753   \def\endsubeqnarray{%
```

```

7754 \H@endsubeqnarray
7755 }%
7756 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7757 }

```

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

```

7758 \def\make@stripped@name#1{%
7759 \begingroup
7760 \escapechar\m@ne
7761 \global\let\newname\@empty
7762 \protected@edef\Hy@tempa{#1}%
7763 \edef\@tempb{%
7764 \noexpand\@tfor\noexpand\Hy@tempa:=%
7765 \expandafter\strip@prefix\meaning\Hy@tempa
7766 }%
7767 \@tempb\do{%
7768 \if\Hy@tempa\else
7769 \if\Hy@tempa\else
7770 \xdef\newname{\newname\Hy@tempa}%
7771 \fi
7772 \fi
7773 }%
7774 \endgroup
7775 }

```

Support for amsmath's subequations:

```

7776 \begingroup\expandafter\expandafter\expandafter\endgroup
7777 \expandafter\ifx\csname subequations\endcsname\relax
7778 \else
7779 \let\HyOrg@subequations\subequations
7780 \def\subequations{%
7781 \stepcounter{equation}%
7782 \protected@edef\theHparentequation{%
7783 \@ifundefined{theHequation}\theequation\theHequation
7784 }%
7785 \addtocounter{equation}{-1}%
7786 \HyOrg@subequations
7787 \def\theHequation{\theHparentequation\alph{equation}}%
7788 \ignorespaces
7789 }%
7790 \fi

```

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

```

7791 \Hy@AtBeginDocument{%
7792 \@ifpackageloaded{cleveref}{%
7793 \let\Hy@savedthm\@thm
7794 \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7795 }{%
7796 \@ifpackageloaded{amsthm}{%

```

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

```

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

7797 \def\Hy@temp#1#2#3{%
7798 \ifhmode\unskip\unskip\par\fi
7799 \normalfont

```

```

7800 \trivlist
7801 \let\thmheadnl\relax
7802 \let\thm@swap\@gobble
7803 \let\thm@indent\indent % indent
7804 \thm@headfont{\scshape}% heading font small caps
7805 \thm@notefont{\fontseries\mddefault\upshape}%
7806 \thm@headpunct{.}% add period after heading
7807 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7808 \thm@space@setup
7809 #1% style overrides
7810 \@topsep \thm@preskip % used by thm head
7811 \@topsepadd \thm@postskip % used by \@endparenv
7812 \def\@tempa{#2}\ifx\@empty\@tempa
7813 \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
7814 \else
7815 \refstepcounter{#2}%
7816 \def\@tempa{%
7817 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7818 }%
7819 \fi
7820 \@tempa
7821 }%
7822 \ifx\Hy@temp\@thm
7823 \def\@thm#1#2#3{%
7824 \ifhmode
7825 \unskip\unskip\par
7826 \fi
7827 \normalfont
7828 \trivlist
7829 \let\thmheadnl\relax
7830 \let\thm@swap\@gobble
7831 \let\thm@indent\indent % indent
7832 \thm@headfont{\scshape}% heading font small caps
7833 \thm@notefont{\fontseries\mddefault\upshape}%
7834 \thm@headpunct{.}% add period after heading
7835 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7836 \thm@space@setup
7837 #1% style overrides
7838 \@topsep \thm@preskip % used by thm head
7839 \@topsepadd \thm@postskip % used by \@endparenv
7840 \def\dth@counter{#2}%
7841 \ifx\@empty\dth@counter
7842 \def\@tempa{%
7843 \@oparg{\@begintheorem{#3}{}}}%
7844 }%
7845 \else
7846 \H@refstepcounter{#2}%
7847 \hyper@makecurrent{#2}%
7848 \let\Hy@dth@currentHref\@currentHref
7849 \def\@tempa{%
7850 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7851 }%
7852 \fi
7853 \@tempa
7854 }%
7855 \else
7856 \def\@thm#1#2#3{%

```

```

7857 \ifhmode
7858   \unskip\unskip\par
7859 \fi
7860 \normalfont
7861 \trivlist
7862 \let\thmheadnl\relax
7863 \let\thm@swap\@gobble
7864 \thm@notefont{\fontseries\mddefault\upshape}%
7865 \thm@headpunct{.}% add period after heading
7866 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7867 \thm@space@setup
7868 #1% style overrides
7869 \@topsep \thm@preskip           % used by thm head
7870 \@topsepadd \thm@postskip       % used by \@endparenv
7871 \def\dth@counter{#2}%
7872 \ifx\@empty\dth@counter
7873   \def\@tempa{%
7874     \@oparg{\@begintheorem{#3}{}}[]%
7875   }%
7876 \else
7877   \H@refstepcounter{#2}%
7878   \hyper@makecurrent{#2}%
7879   \let\Hy@dth@currentHref\@currentHref
7880   \def\@tempa{%
7881     \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7882   }%
7883 \fi
7884 \@tempa
7885 }%
7886 \fi
7887 \dth@everypar={%
7888   \@minipagefalse
7889   \global\@newlistfalse
7890   \@noparitemfalse
7891   \if@inlabel
7892     \global\@inlabelfalse
7893     \begingroup
7894       \setbox\z@\lastbox
7895       \ifvoid\z@
7896         \kern-\itemindent
7897       \fi
7898     \endgroup
7899     \ifx\@empty\dth@counter
7900     \else
7901       \Hy@raisedlink{%
7902         \hyper@anchorstart{%
7903           \ltx@ifundefined{Hy@dth@currentHref}%
7904             \@currentHref\Hy@dth@currentHref
7905           }\hyper@anchorend
7906         }%
7907       \fi
7908     \unhbox\@labels
7909   \fi
7910   \if@nobreak
7911     \@nobreakfalse \clubpenalty\@M
7912   \else
7913     \clubpenalty\@clubpenalty \everypar{}%

```

```

7914   \fi
7915 }%
7916 }%

```

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

```

7917 {%
7918 \let\Hy@savedthm\@thm
7919 \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7920 }%
7921 }%
7922 }

```

36 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.

```

7923 \ifHy@hyperfootnotes
7924   \newcounter{Hfootnote}%
7925   \let\H@@footnotetext\@footnotetext
7926   \let\H@@footnotemark\@footnotemark
7927   \def\@xfootnotenext[#1]{%
7928     \begingroup
7929       \csname c@\@mpfn\endcsname #1\relax
7930       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7931     \endgroup
7932     \ifx\@footnotetext\@mpfootnotetext
7933       \expandafter\H@@mpfootnotetext
7934     \else
7935       \expandafter\H@@footnotetext
7936     \fi
7937   }%
7938   \def\@xfootnotemark[#1]{%
7939     \begingroup
7940       \c@footnote #1\relax
7941       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7942     \endgroup
7943     \H@@footnotemark
7944   }%
7945   \let\H@@mpfootnotetext\@mpfootnotetext
7946   \long\def\@mpfootnotetext#1{%
7947     \H@@mpfootnotetext{%
7948       \ifHy@nesting
7949         \expandafter\ltx@firstoftwo
7950       \else
7951         \expandafter\ltx@secondoftwo
7952       \fi
7953     }%
7954     \expandafter\hyper@@anchor\expandafter{%
7955       \Hy@footnote@currentHref
7956     }\ignorespaces #1}%
7957   }{%
7958     \Hy@raisedlink{%
7959       \expandafter\hyper@@anchor\expandafter{%

```

```

7960      \Hy@footnote@currentHref
7961      }{\relax}%
7962    }\ignorespaces #1%
7963  }%
7964 }%
7965}%
7966 \long\def\@footnotetext#1{%
7967   \H@@@footnotetext{%
7968     \ifHy@nesting
7969       \expandafter\ltx@firstoftwo
7970     \else
7971       \expandafter\ltx@secondoftwo
7972     \fi
7973     {%
7974       \expandafter\hyper@@@anchor\expandafter{%
7975         \Hy@footnote@currentHref
7976       }{\ignorespaces #1}%
7977     }{%
7978       \Hy@raisedlink{%
7979         \expandafter\hyper@@@anchor\expandafter{%
7980           \Hy@footnote@currentHref
7981         }{\relax}%
7982       }%
7983       \let\@currentHref\Hy@footnote@currentHref
7984       \let\@currentlabelname\@empty
7985       \ignorespaces #1%
7986     }%
7987   }%
7988 }%

```

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.

```

7989 \def\@footnotemark{%
7990   \leavevmode
7991   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7992   \stepcounter{Hfootnote}%
7993   \global\let\Hy@saved@currentHref\@currentHref
7994   \hyper@makecurrent{Hfootnote}%
7995   \global\let\Hy@footnote@currentHref\@currentHref
7996   \global\let\@currentHref\Hy@saved@currentHref
7997   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7998   \@makefnmark
7999   \hyper@linkend
8000   \ifhmode\spacefactor\@x@sf\fi
8001   \relax
8002 }%

```

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

```

8003 \ifpackageloaded{tabularx}{%
8004   \let\HyOrg@TX@endtabularx\TX@endtabularx
8005   \def\Hy@tabularx@hook{%
8006     \let\@footnotetext\H@@@footnotetext
8007     \let\@footnotemark\H@@@footnotemark
8008     \let\@mpfootnotetext\H@@@mpfootnotetext

```

```

8009 }%
8010 \begingroup
8011 \toks@{\expandafter{\TX@endtabularx}}%
8012 \xdef\Hy@gtemp{%
8013   \noexpand\Hy@tabularx@hook
8014   \the\toks@
8015 }%
8016 \endgroup
8017 \let\TX@endtabularx\Hy@gtemp
8018 }{}%

```

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

```

8019 \@ifpackageloaded{longtable}{%
8020   \CheckCommand*{\LT@p@ftntext}[1]{%
8021     \edef\@tempa{%
8022       \the\LT@p@ftn
8023       \noexpand\footnotetext[\the\c@footnote]%
8024     }%
8025     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
8026   }%
8027   \long\def\LT@p@ftntext#1{%
8028     \edef\@tempa{%
8029       \the\LT@p@ftn
8030     }%
8031     \begingroup
8032     \noexpand\c@footnote=\the\c@footnote\relax
8033     \noexpand\protected\xdef\noexpand\@thefnmark{%
8034       \noexpand\thempfn
8035     }%
8036     \noexpand\Hy@LT@footnotetext{%
8037       \Hy@footnote@currentHref
8038     }%
8039     \global\LT@p@ftn\expandafter{%
8040       \@tempa{#1}%
8041     }%
8042   }%
8043 }%
8044 \long\def\Hy@LT@footnotetext#1#2{%
8045   \H@@@footnotetext{%
8046     \ifHy@nesting
8047       \hyper@@@anchor{#1}{#2}%
8048     \else
8049       \Hy@raisedlink{%
8050         \hyper@@@anchor{#1}{\relax}%
8051       }%
8052       \def\@currentHref{#1}%
8053       \let\@currentlabelname\@empty
8054       #2%
8055     \fi
8056   }%
8057 }%
8058 }{}%

```

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

```

8059 \@ifpackageloaded{fancyvrb}{%

```

```

8060 \def\V@@footnotetext{%
8061 \insert\footins\bgroup
8062 \cename reset@font\endcsname
8063 \footnotesize
8064 \interlinepenalty\interfootnotelinepenalty
8065 \splittopskip\footnotesep
8066 \splitmaxdepth\dp\strutbox
8067 \floatingpenalty \@MM
8068 \hsize\columnwidth
8069 \@parboxrestore
8070 \edef\@currentlabel{\cename p@footnote\endcsname\@thefnmark}%
8071 \@makefnmark{}%
8072 \rule{\z@}{\footnotesep}%
8073 \bgroup
8074 \aftergroup\V@@@footnotetext
8075 \Hy@raisedlink{%
8076 \expandafter\hyper@@anchor\expandafter{%
8077 \Hy@footnote@currentHref
8078 }\relax}%
8079 }%
8080 \let\@currentHref\Hy@footnote@currentHref
8081 \let\@currentlabelname\@empty
8082 \ignorespaces
8083 }%
8084 }{}%

```

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

```

8085 \def\Hy@temp#1{%
8086 \begingroup
8087 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8088 \endgroup
8089 \@footnotemark
8090 }%
8091 \ifx\Hy@temp\footref
8092 \def\footref#1{%
8093 \begingroup
8094 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8095 \endgroup
8096 \H@@@footnotemark
8097 }%
8098 \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.

```

8099 \let\HyOrg@maketitle\maketitle
8100 \def\maketitle{%
8101 \let\Hy@saved@footnotemark\@footnotemark
8102 \let\Hy@saved@footnotetext\@footnotetext
8103 \let\@footnotemark\H@@@footnotemark
8104 \let\@footnotetext\H@@@footnotetext
8105 \@ifnextchar[\Hy@maketitle@optarg{% ]
8106 \HyOrg@maketitle
8107 \Hy@maketitle@end
8108 }%
8109 }%
8110 \def\Hy@maketitle@optarg[#1]{%

```



```

8111 \HyOrg@maketitle[{\#1}]%
8112 \Hy@maketitle@end
8113 }%
8114 \def\Hy@maketitle@end{%
8115 \ifx\@footnotemark\H@@footnotemark
8116 \let\@footnotemark\Hy@saved@footnotemark
8117 \fi
8118 \ifx\@footnotetext\H@@footnotetext
8119 \let\@footnotetext\Hy@saved@footnotetext
8120 \fi
8121 }%

```

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

```

8122 \def\realfootnote{%
8123 \@ifnextchar[\@xfootnote{%
8124 \stepcounter{\@mpfn}%
8125 \protected@xdef\@thefnmark{\thempfn}%
8126 \H@@@footnotemark\H@@@footnotetext
8127 }%
8128 }%

8129 \fi
8130 \Hy@DisableOption{hyperfootnotes}

8131 </package>
8132 <*check>
8133 \checklatex
8134 \checkcommand\def\@xfootnotenext[#1]{%
8135 \begingroup
8136 \csname c@\@mpfn\endcsname #1\relax
8137 \unrestored@protected@xdef\@thefnmark{\thempfn}%
8138 \endgroup
8139 \@footnotetext
8140 }
8141 \checkcommand\def\@xfootnotemark[#1]{%
8142 \begingroup
8143 \c@footnote #1\relax
8144 \unrestored@protected@xdef\@thefnmark{\thefnmark}%
8145 \endgroup
8146 \@footnotemark
8147 }
8148 \checkcommand\def\@footnotemark{%
8149 \leavevmode
8150 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8151 \@makefnmark
8152 \ifhmode\spacefactor\@x@sf\fi
8153 \relax
8154 }
8155 </check>
8156 <*package>

```

37 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.

```

8157 \def\caption{%
8158 \ifx\@capttype\@undefined

```

```

8159 \latex@error{\noexpand\caption outside float}\@ehd
8160 \expandafter\@gobble
8161 \else
8162 \H@refstepcounter\@captype
8163 \let\Hy@tempa\@caption
8164 \@ifundefined{float@caption}{%
8165 }{%
8166 \expandafter\ifx\csname @float@c@\@captype\endcsname
8167 \float@caption
8168 \let\Hy@tempa\Hy@float@caption
8169 \fi
8170 }%
8171 \expandafter\@firstofone
8172 \fi
8173 {\@dblarg{\Hy@tempa\@captype}}}%
8174 }
8175 \long\def\@caption#1[#2]#3{%
8176 \expandafter\ifx\csname if@capstart\expandafter\endcsname
8177 \csname iftrue\endcsname
8178 \global\let\@currentHref\hc@currentHref
8179 \else
8180 \hyper@makecurrent{\@captype}%
8181 \fi
8182 \@ifundefined{NR@gettitle}{%
8183 \def\@currentlabelname{#2}%
8184 }{%
8185 \NR@gettitle{#2}%
8186 }%
8187 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8188 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8189 }%
8190 \begingroup
8191 \@parboxrestore
8192 \if@minipage
8193 \setminipage
8194 \fi
8195 \normalsize
8196 \expandafter\ifx\csname if@capstart\expandafter\endcsname
8197 \csname iftrue\endcsname
8198 \global\@capstartfalse
8199 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8200 \else
8201 \@makecaption{\csname fnum@#1\endcsname}{%
8202 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8203 \ifHy@nesting
8204 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
8205 \else
8206 \Hy@raisedlink{%
8207 \expandafter\hyper@@anchor\expandafter{%
8208 \@currentHref
8209 }{\relax}%
8210 }%
8211 #3%
8212 \fi
8213 }%
8214 \fi

```

```

8215 \par
8216 \endgroup
8217 }

```

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’.

```

8218 \let\Hy@float@caption\@caption
8219 \newcommand{\HyNew@float@makebox}[1]{%
8220 \HyOrg@float@makebox{%
8221 #1\relax
8222 \ifx\Hy@float@currentHref\@undefined
8223 \else
8224 \expandafter\hyper@@anchor\expandafter{%
8225 \Hy@float@currentHref
8226 }\relax}%
8227 \global\let\Hy@float@currentHref\@undefined
8228 \fi
8229 }%
8230 }%
8231 \@ifpackageloaded{float}{%
8232 \def\Hy@float@caption{%
8233 \ifx\Hy@float@currentHref\@undefined
8234 \hyper@makecurrent{\@captive}%
8235 \global\let\Hy@float@currentHref\@currentHref
8236 \else
8237 \let\@currentHref\Hy@float@currentHref
8238 \fi
8239 \float@caption
8240 }%
8241 \let\HyOrg@float@makebox\float@makebox
8242 \let\float@makebox\HyNew@float@makebox
8243 }{}

8244 \</package>
8245 \*check>
8246 \checklatex[1999/06/01 - 2000/06/01]
8247 \checkcommand\def\caption{%
8248 \ifx\@captive\@undefined
8249 \@latex@error{\noexpand\caption outside float}\@ehd
8250 \expandafter\@gobble
8251 \else
8252 \refstepcounter\@captive
8253 \expandafter\@firstofone
8254 \fi
8255 {\@dblarg{\@caption\@captive}}}%
8256 }

8257 \checkcommand\long\def\@caption#1[#2]#3{%
8258 \par
8259 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8260 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
8261 }%
8262 \begingroup
8263 \@parboxrestore
8264 \if@minipage
8265 \@setminipage

```

```

8266 \fi
8267 \normalsize
8268 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8269 \endgroup
8270 }
8271 </check>
8272 <*package>

```

38 Bibliographic references

This is not very robust, since many styles redefine these things. The package used to redefine `\@citex` and the like; then we tried adding the `hyperref` call explicitly into the `.aux` file. Now we redefine `\bibcite`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drftcite* may break.

However, let's make an attempt to get *natbib* right, because that's a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

8273 \def\hyper@natlinkstart#1{%
8274   \Hy@backout{#1}%
8275   \hyper@linkstart{cite}{cite.#1}%
8276   \def\hyper@nat@current{#1}%
8277 }
8278 \def\hyper@natlinkend{%
8279   \hyper@linkend
8280 }
8281 \def\hyper@natlinkbreak#1#2{%
8282   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8283 }
8284 \def\hyper@natanchorstart#1{%
8285   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8286 }
8287 \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.

```

8288 \ltx@ifundefined{NAT@parse}{%
8289   \providecommand*\@extra@binfo{}%
8290   \providecommand*\@extra@b@citeb{}%
8291   \def\bibcite#1#2{%
8292     \@newl@bel{b}{#1\@extra@binfo}{%
8293       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
8294     }%
8295   }%
8296   \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.”.

```

8297 \let\Hy@bibcite\bibcite
8298 \begingroup
8299   \@ifundefined{bbl@cite@choice}{}{%
8300     \g@addto@macro\bbl@cite@choice{%
8301       \let\bibcite\Hy@bibcite
8302     }%

```

```

8303 }%
8304 \endgroup
\@BIBLABEL is working around a 'feature' of RevTeX.
8305 \providecommand*{\@BIBLABEL}{\@biblabel}%
8306 \def\@bibitem[#1]#2{%
8307   \@skiphyperreftrue
8308   \H@item[%
8309     \ifx\Hy@raisedlink\@empty
8310       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8311       \@BIBLABEL{#1}%
8312       \hyper@anchorend
8313     \else
8314       \Hy@raisedlink{%
8315         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8316       }%
8317     \@BIBLABEL{#1}%
8318   \fi
8319   \hfill
8320 ]%
8321 \@skiphyperreffalse
8322 \if@filesw
8323   \begingroup
8324     \let\protect\noexpand
8325     \immediate\write\@auxout{%
8326       \string\bibcite{#2}{#1}%
8327     }%
8328   \endgroup
8329 \fi
8330 \ignorespaces
8331 }%

```

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

```

8332 \def\@bibitem#1{%
8333   \@skiphyperreftrue\H@item\@skiphyperreffalse
8334   \Hy@raisedlink{%
8335     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8336   }%
8337   \if@filesw
8338     \begingroup
8339       \let\protect\noexpand
8340       \immediate\write\@auxout{%
8341         \string\bibcite{#1}{\the\value{\@listctr}}%
8342       }%
8343     \endgroup
8344   \fi
8345   \ignorespaces
8346 }%
8347 }{}

8348 \</package>
8349 \< *check>
8350 \checklatex
8351 \checkcommand\def\@bibitem[#1]#2{%
8352   \item[\@biblabel{#1}\hfill]%
8353   \if@filesw
8354     {%
8355     \let\protect\noexpand

```

```

8356 \immediate\write\@auxout{%
8357 \string\bibcite{#2}{#1}%
8358 }%
8359 }%
8360 \fi
8361 \ignorespaces
8362 }
8363 \checkcommand\def\@bibitem#1{%
8364 \item
8365 \if@filesw
8366 \immediate\write\@auxout{%
8367 \string\bibcite{#1}{\the\value{\@listctr}}}%
8368 }%
8369 \fi
8370 \ignorespaces
8371 }
8372 </check>
8373 <*package>

```

Revtext (bless its little heart) takes over `\bibcite` and looks at the result to measure something. Make this a hypertext link and it goes ape. Therefore, make an anodyne result first, call its business, then go back to the real thing.

```

8374 \ifclassloaded{revtext}{%
8375 \Hy@Info{*** compatibility with revtext **** }%
8376 \def\revtext@checking#1#2{%
8377 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8378 \expandafter\def\csname b@#1\endcsname{#2}%
8379 \@SetMaxRnhefLabel{#1}%
8380 \expandafter\let\csname b@#1\endcsname\T@temp
8381 }%

```

Tanmoy provided this replacement for CITE_X. Lord knows what it does. For chapterbib added: `extra@b@citeb`

```

8382 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
8383 \providecommand*\@extra@b@citeb{}%
8384 \def\CITEX[#1]#2{%
8385 \let\@citea\@empty
8386 \leavevmode
8387 \unskip
8388 $\sim{}%
8389 \scriptstyle
8390 \CITE{%
8391 \@for\@citeb:=#2\do{%
8392 \@citea
8393 \def\@citea{\penalty\@m\ }%
8394 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8395 \if@filesw
8396 \immediate\write\@auxout{\string\citation{\@citeb}}%
8397 \fi
8398 \@ifundefined{b@\@citeb\extra@b@citeb}{%
8399 \mbox{\reset@font\bfseries ?}%
8400 \G@refundefinedtrue
8401 \@latex@warning{%
8402 Citation '\@citeb' on page \thepage \space undefined%
8403 }%
8404 }{%
8405 {\csname b@\@citeb\extra@b@citeb\endcsname}%
8406 }%

```

```

8407     }%
8408     }{#1}%
8409     }$%
8410 }%

```

No, life is too short. I am not going to understand the Revtex `\@collapse` macro, I shall just restore the original behaviour of `\@citex`; sigh. This is SO vile.

```

8411 \def\@citex[#1]#2{%
8412   \let\@citea\@empty
8413   \@cite{%
8414     \@for\@citeb:=#2\do{%
8415       \@citea
8416       \def\@citea{,\penalty\@m\ }%
8417       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8418       \if@filesw
8419         \immediate\write\@auxout{\string\citation{\@citeb}}%
8420       \fi
8421       \@ifundefined{b@\@citeb\@extra@b@citeb}{%
8422         \mbox{\reset@font\bfseries ?}%
8423         \G@refundefinedtrue
8424         \@latex@warning{%
8425           Citation `'\@citeb' on page \thepage \space undefined%
8426         }%
8427       }{%
8428         \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8429       }%
8430     }%
8431   }{#1}%
8432 }%
8433 }{}

```

38.1 Package harvard

Override Peter Williams' Harvard package; we have to a) make each of the citation types into a link; b) make each citation write a backref entry, and c) kick off a backreference section for each bibliography entry.

The redefinitions have to be deferred to `\begin{document}`, because if `harvard.sty` is loaded and `html.sty` is present and detects pdfTeX, then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

8434 \@ifpackageloaded{harvard}{%
8435   \Hy@AtBeginDocument{%
8436     \Hy@Info{*** compatibility with harvard *** }%
8437     \Hy@raiselinksfalse
8438     \def\harvardcite#1#2#3#4{%
8439       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{\cite.#1}{#2}}%
8440       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{\cite.#1}{#3}}%
8441       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{\cite.#1}{#4}}%
8442       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8443     }%
8444     \def\HAR@citetoaux#1{%
8445       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8446       \ifHy@backref
8447         \ifx\@empty\@currentlabel
8448           \else
8449             \@bsphack
8450             \if@filesw

```

```

8451         \protected@write\@auxout{}\{
8452         \string\@writefile{brf}\{
8453         \string\backcite{#1}\{
8454         {\thepage}\{\@currentlabel}\{\@currentHref}\}
8455         }\}
8456     }\}
8457 }\}
8458 \fi
8459 \@esphack
8460 \fi
8461 \fi
8462 }\}
8463 \def\harvarditem{%
8464     \ifnextchar{\@harvarditem}\@harvarditem[\null]\}
8465 }\}
8466 \def\@harvarditem[#1]#2#3#4#5\par{%
8467     \item[]
8468     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8469     \if@filesw
8470         \begingroup
8471             \def\protect##1{\string ##1\space}%
8472             \ifthenelse{\equal{#1}\{\null\}}{
8473                 {\def\next{{#4}{#2}{#2}{#3}}}%
8474                 {\def\next{{#4}{#2}{#1}{#3}}}%
8475             \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8476         \endgroup
8477     \fi
8478     \protect\hspace*{-\labelwidth}%
8479     \protect\hspace*{-\labelsep}%
8480     \ignorespaces
8481     #5%
8482     \ifHy@backref
8483         \newblock
8484         \backref{\csname br@#4\endcsname}%
8485     \fi
8486     \par
8487 }\}

```

\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:

```

8488 \long\def\HAR@checkcitations#1#2#3#4{%
8489     \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#2}}%
8490     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8491         \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#3}}%
8492     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8493         \def\HAR@tempa{\hyper@@link[cite]\{cite.#1\}{#4}}%
8494     \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8495     \else
8496         \@tempswatrue
8497     \fi
8498     \else
8499         \@tempswatrue
8500     \fi
8501     \else
8502         \@tempswatrue
8503     \fi

```



```

8504 }%
8505 }%

8506 }{}

```

38.2 Package chicago

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

```

8507 \@ifpackageloaded{chicago}{%

\citeN
8508 \def\citeN{%
8509 \def\@citesep{-1000}%
8510 \def\@cite##1##2{##1}%
8511 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8512 \@citedata@opt
8513 }%

\shortciteN
8514 \def\shortciteN{%
8515 \def\@citesep{-1000}%
8516 \def\@cite##1##2{##1}%
8517 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8518 \@citedata@opt
8519 }%

\@citedata@opt
8520 \def\@citedata@opt{%
8521 \let\@cite@opt\@empty
8522 \@ifnextchar [{%
8523 \@tempswatrue
8524 \@citedatax@opt
8525 }{%
8526 \@tempswafalse
8527 \@citedatax[]%
8528 }%
8529 }%

\@citedatax@opt
8530 \def\@citedatax@opt[#1]{%
8531 \def\@cite@opt{, #1}%
8532 \@citedatax[{#1}]%
8533 }%

8534 }{}

```

39 Page numbers

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

This where we supply a destination for each page.

```

8535 \ltx@ifclassloaded{slides}{%

```

```

8536 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8537 \def\Hy@PageAnchorSlidesPlain{%
8538   \advance\c@page\ltx@one
8539   \edef\Hy@TempPageAnchor{%
8540     \noexpand\hyper@{anchor{%
8541       page.\the\c@slide.\the\c@overlay.\the\c@note%
8542       \ifnum\c@page=\ltx@one
8543         \else
8544           .\the\c@page
8545         \fi
8546       }%
8547     }%
8548     \advance\c@page-\ltx@one
8549   }%
8550 \def\Hy@PageAnchorSlide{%
8551   \advance\c@page\ltx@one
8552   \ifnum\c@page>\ltx@one
8553     \ltx@ifundefined{theHpage}{%
8554       \protected@edef\Hy@TheSlideOptionalPage{%
8555         \Hy@SlidesFormatOptionalPage{thepage}%
8556       }%
8557     }{%
8558       \protected@edef\Hy@TheSlideOptionalPage{%
8559         \Hy@SlidesFormatOptionalPage{theHpage}%
8560       }%
8561     }%
8562   \else
8563     \def\Hy@TheSlideOptionalPage{}%
8564   \fi
8565   \advance\c@page-\ltx@one
8566   \pdfstringdef\@the@H@page{%
8567     \csname
8568       the%
8569       \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8570       \Hy@SlidesPage
8571     \endcsname
8572     \Hy@TheSlideOptionalPage
8573   }%
8574   \ltx@gobblethree
8575 }%
8576 \def\Hy@SlidesPage{slide}%
8577 \g@addto@macro\slide{%
8578   \def\Hy@SlidesPage{slide}%
8579 }%
8580 \g@addto@macro\overlay{%
8581   \def\Hy@SlidesPage{overlay}%
8582 }%
8583 \g@addto@macro\note{%
8584   \def\Hy@SlidesPage{note}%
8585 }%
8586 }%
8587 \def\Hy@PageAnchorSlidesPlain{}%
8588 \def\Hy@PageAnchorSlide{}%
8589 }
8590 \def\Hy@EveryPageAnchor{%
8591   \Hy@DistillerDestFix
8592   \ifHy@pageanchor

```

```

8593 \ifHy@hypertextnames
8594 \ifHy@plainpages
8595 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8596 \Hy@PageAnchorSlidesPlain
8597 \else
8598 \begingroup
8599 \let\@number\@firstofone
8600 \Hy@unicodedefalse
8601 \Hy@PageAnchorSlide
8602 \pdfstringdef\@the@H@page{\thepage}%
8603 \endgroup
8604 \EdefUnescapeString\@the@H@page{\@the@H@page}%
8605 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8606 \fi
8607 \else
8608 \Hy@GlobalStepCount\Hy@pagecounter
8609 \def\Hy@TempPageAnchor{%
8610 \hyper@@anchor{page.\the\Hy@pagecounter}%
8611 }%
8612 \fi
8613 \vbox to 0pt{%
8614 \kern\voffset
8615 \kern\topmargin
8616 \kern-1bp\relax
8617 \hbox to 0pt{%
8618 \kern\hoffset
8619 \kern\ifodd\value{page}%
8620 \oddsidemargin
8621 \else
8622 \evensidemargin
8623 \fi
8624 \kern-1bp\relax
8625 \Hy@TempPageAnchor\relax
8626 \hss
8627 }%
8628 \vss
8629 }%
8630 \fi
8631 }
8632 \g@addto@macro\Hy@EveryPageBoxHook{%
8633 \Hy@EveryPageAnchor
8634 }

```

40 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.

```

8635 % In newer \LaTeX\ releases this is defined to put a \verb|%| at the end of the
8636 % line in the \textt{toc} file.
8637 % \begin{macrocode}
8638 \providecommand\protected@file@percent{}
8639 \def\addcontentsline#1#2#3{% toc extension, type, tag
8640 \begingroup
8641 \let\label\@gobble
8642 \ifx\@currentHref\@empty

```

```

8643 \Hy@Warning{%
8644   No destination for bookmark of \string\addcontentsline,%
8645   \MessageBreak destination is added%
8646 }%
8647 \phantomsection
8648 \fi
8649 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8650 \begingroup
8651   \def\Hy@tempa{#1}%
8652   \ifx\Hy@tempa\Hy@bookmarkstype
8653     \Hy@WarningNoLine{%
8654       bookmark level for unknown #2 defaults to 0%
8655     }%
8656   \else
8657     \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8658   \fi
8659 \endgroup
8660 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8661 \fi
8662 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
8663 \Hy@writebookmark{\csname the#2\endcsname}%
8664   {#3}%
8665   {\@currentHref}%
8666   {\Hy@toclevel}%
8667   {#1}%
8668 \ifHy@verbose
8669 \begingroup
8670   \def\Hy@tempa{#3}%
8671   \@onelevel@sanitize\Hy@tempa
8672   \let\temp@online\on@line
8673   \let\on@line\@empty
8674   \Hy@Info{%
8675     bookmark\temp@online:\MessageBreak
8676     thecounter {\csname the#2\endcsname}\MessageBreak
8677     text {\Hy@tempa}\MessageBreak
8678     reference {\@currentHref}\MessageBreak
8679     toplevel {\Hy@toclevel}\MessageBreak
8680     type {#1}%
8681   }%
8682 \endgroup
8683 \fi
8684 \addtocontents{#1}{%
8685   \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8686   }%
8687 \endgroup
8688 }

```

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

```

8689 \def\contentsline#1#2#3#4{%
8690   \begingroup
8691     \Hy@safe@activetrue
8692   \edef\x{\endgroup
8693     \def\noexpand\Hy@tocdestname{#4}%
8694   }\x
8695   \ifx\Hy@tocdestname\ltx@empty

```

```

8696 \csname l@#1\endcsname{#2}{#3}%
8697 \else
8698 \ifcase\Hy@linktoc % none
8699 \csname l@#1\endcsname{#2}{#3}%
8700 \or % section
8701 \csname l@#1\endcsname{%
8702 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8703 }{#3}%
8704 \or % page
8705 \def\Hy@temp{#3}%
8706 \ifx\Hy@temp\ltx@empty
8707 \csname l@#1\endcsname{#2}{#3}%
8708 \else
8709 \csname l@#1\endcsname{#{#2}}{#3}%
8710 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8711 }%
8712 \fi
8713 \else % all
8714 \def\Hy@temp{#3}%
8715 \ifx\Hy@temp\ltx@empty
8716 \csname l@#1\endcsname{%
8717 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8718 }{}%
8719 \else
8720 \csname l@#1\endcsname{%
8721 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8722 }{#3}%
8723 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8724 }%
8725 \fi
8726 \fi
8727 \fi
8728 }

8729 \end{package}
8730 \end{check}
8731 \checklatex
8732 \checkcommand\def\addcontentsline#1#2#3{%
8733 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8734 }
8735 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8736 \end{check}
8737 \end{package}

```

41 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.

```

8738 \let\H@definecounter\@definecounter
8739 \def\@definecounter#1{%
8740 \H@definecounter{#1}%
8741 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8742 }

```

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.

```

8743 \let\H@newctr\@newctr

```

```

8744 \def\@newctr#1[#2]{%
8745   \H@newctr#1[#2]}%
8746   \expandafter\gdef\csname theH#1\endcsname{%
8747     \csname the\@ifundefined{theH#2}{-}{H}#2\endcsname.\arabic{#1}%
8748   }%
8749 }

```

42 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.

```

8750 \@ifpackageloaded{amsmath}{%
8751   \def\Hy@make@anchor{%
8752     \Hy@MakeCurrentHrefAuto{AMS}%
8753     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8754   }%
8755   \def\Hy@make@df@tag@@#1{%
8756     \gdef\df@tag{%
8757       \maketag@@@{\Hy@make@anchor#1}%
8758       \def\@currentlabel{#1}%
8759     }%
8760   }%
8761   \def\Hy@make@df@tag@@@#1{%
8762     \gdef\df@tag{%
8763       \tagform@{\Hy@make@anchor#1}%
8764       \toks@{\xp{p@equation{#1}}}%
8765       \edef\@currentlabel{\the\toks@}%
8766     }%
8767   }%
8768   \let\HyOrg@make@df@tag@@\make@df@tag@@
8769   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8770   \let\make@df@tag@@\Hy@make@df@tag@@
8771   \let\make@df@tag@@@\Hy@make@df@tag@@@
8772 }{}

```

Only play with `\seteqlebal` if we are using pdf \TeX . Other drivers cause problems; requested by Michael Downes (AMS).

```

8773 \@ifpackagewith{hyperref}{pdf $\TeX$ }{%
8774   \let\H@seteqlabel\@seteqlabel
8775   \def\@seteqlabel#1{%
8776     \H@seteqlabel{#1}%
8777     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8778     \Hy@raisedlink{%
8779       \hyper@anchorstart{\@currentHref}\hyper@anchorend
8780     }%
8781   }%
8782 }{}

```

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}}}}

```

42.1 \@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.

```

8783 \let\HyOrg@addtoreset\@addtoreset
8784 \def\@addtoreset#1#2{%
8785   \HyOrg@addtoreset{#1}{#2}%
8786   \expandafter\xdef\csname theH#1\endcsname{%
8787     \expandafter\noexpand
8788       \csname the\@ifundefined{theH#2}{}H#2\endcsname
8789     .\noexpand\the\noexpand\value{#1}%
8790   }%
8791 }

```

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

```

8792 \</package>
8793 \< *check>
8794 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8795 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8796   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8797     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8798       \@addtoreset{#2}{#3}%
8799       \@xp\xdef\csname the#2\endcsname{%
8800         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8801       }%
8802     }%
8803   }%
8804 }%
8805 \</check>
8806 \< *package>
8807 \@ifpackageloaded{amsmath}{%
8808   \@ifpackagelater{amsmath}{1999/12/14}{%
8809     \renewcommand*\numberwithin[3][\arabic]{%
8810       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8811         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8812           \HyOrg@addtoreset{#2}{#3}%
8813           \@xp\xdef\csname the#2\endcsname{%
8814             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8815           }%
8816           \@xp\xdef\csname theH#2\endcsname{%
8817             \@xp\@nx
8818             \csname the\@ifundefined{theH#3}{}H#3\endcsname
8819             .\@nx#1{#2}%
8820           }%
8821         }%
8822       }%
8823     }%
8824   }%
8825   \Hy@WarningNoLine{%

```

```

8826 \string\numberwithin\space of package `amsmath' %
8827 only fixed\MessageBreak
8828 for version 2000/06/06 v2.12 or newer%
8829 }%
8830 }%
8831 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8832 \ifHy@hyperfigures
8833 \let\Hy@Gin@setfile\Gin@setfile
8834 \def\Gin@setfile#1#2#3{%
8835 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8836 }%
8837 \fi
8838 \Hy@DisableOption{hyperfigures}

```

44 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 boldfening 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.

```

8839 \ifHy@hyperindex
8840 \def\HyInd@ParenLeft{({}%
8841 \def\HyInd@ParenRight{)}}%
8842 \def\hyperindexformat#1#2{%
8843 \let\HyOrg@hyperpage\hyperpage
8844 \let\hyperpage\@firstofone
8845 #1{\HyOrg@hyperpage{#2}}%
8846 \let\hyperpage\HyOrg@hyperpage
8847 }%
8848 \Hy@nextfalse
8849 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8850 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8851 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8852 \begin{group}
8853 \lccode`|=\expandafter`\HyInd@EncapChar\relax
8854 \lccode`\/=\relax
8855 \lowercase{\endgroup}
8856 \ifHy@next
8857 \let\HyInd@org@wrindex\@wrindex
8858 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|}%
8859 \def\HyInd@@wrindex#1#2|#3|#4{\%
8860 \ifx\#3\%
8861 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8862 \else
8863 \HyInd@@@wrindex{#1}{#2}#3\%

```



```

8864 \fi
8865 }%
8866 \def\HyInd@@@wrindex#1#2#3#4\{\%
8867 \def\Hy@temp@A{#3}%
8868 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8869 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8870 \relax
8871 \HyInd@org@wrindex{#1}{\%
8872 #2|hyperindexformat{/#3#4}%
8873 }%
8874 \else
8875 \ifx\#4\%
8876 \ifx\Hy@temp@A\HyInd@ParenRight
8877 \HyInd@org@wrindex{#1}{#2|#3}%
8878 \else
8879 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8880 \fi
8881 \else
8882 \HyInd@org@wrindex{#1}{\%
8883 #2|#3hyperindexformat{/#4}%
8884 }%
8885 \fi
8886 \fi
8887 }%
8888 \else
8889 \def\@wrindex#1{\@wrindex#1||\}%
8890 \def\@wrindex#1|#2|#3\{\%
8891 \if@filesw
8892 \ifx\#2\%
8893 \protected@write\@indexfile{\%
8894 \string\indexentry{#1|hyperpage}{\thepage}%
8895 }%
8896 \else
8897 \HyInd@@@wrindex{#1}#2\%
8898 \fi
8899 \fi
8900 \endgroup
8901 \@esphack
8902 }%
8903 \def\HyInd@@@wrindex#1#2#3\{\%
8904 \def\Hy@temp@A{#2}%
8905 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8906 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8907 \relax
8908 \protected@write\@indexfile{\%
8909 \string\indexentry{\%
8910 #1|hyperindexformat{/#2#3}%
8911 }{\thepage}%
8912 }%
8913 \else
8914 \ifx\#3\%
8915 \ifx\Hy@temp@A\HyInd@ParenRight
8916 \HyInd@DefKey{#1}%
8917 \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8918 \let\Hy@temp\ltx@empty
8919 }{\%
8920 \expandafter\let\expandafter\Hy@temp

```

```

8921         \csname HyInd@(\HyInd@key)\endcsname
8922     }%
8923     \protected@write\@indexfile{}\{%
8924         \string\indexentry{#1|#2\Hy@temp}\thepage}%
8925     }%
8926 \else
8927     \protected@write\@indexfile{}\{%
8928         \string\indexentry{#1|#2hyperpage}\thepage}%
8929     }%
8930     \HyInd@DefKey{#1}%
8931     \expandafter
8932     \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8933         hyperpage%
8934     }%
8935 \fi
8936 \else
8937     \protected@write\@indexfile{}\{%
8938         \string\indexentry{%
8939             #1|#2hyperindexformat{/#3}%
8940         }\thepage}%
8941     }%
8942     \ifx\Hy@temp@A\HyInd@ParenLeft
8943         \HyInd@DefKey{#1}%
8944         \expandafter
8945         \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8946             hyperindexformat{/#3}%
8947         }%
8948     \fi
8949 \fi
8950 \fi
8951 }%
8952 \def\HyInd@DefKey#1{%
8953     \begingroup
8954     \let\protect\@unexpandable@protect
8955     \edef\Hy@temp{#1}%
8956     \ltx@onelevel@sanitize\Hy@temp
8957     \global\let\HyInd@key\Hy@temp
8958     \endgroup
8959 }%
8960 \fi
8961 }%
8962 \fi
8963 \Hy@DisableOption{hyperindex}
8964 \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.

```
8965 \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.

```

8966 \def\hyperpage#1{%
8967     \HyInd@hyperpage#1\nohyperpage{}\@nil
8968 }
8969 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8970     \HyInd@@hyperpage{#1}%
8971     #2%

```

```

8972 \def\Hy@temp{#3}%
8973 \ifx\Hy@temp\@empty
8974 \else
8975 \ltx@ReturnAfterFi{%
8976 \HyInd@hyperpage#3\@nil
8977 }%
8978 \fi
8979 }
8980 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8981 \def\@hyperpage#1--#2--#3\{\{%
8982 \ifx\#2\%
8983 \@commahyperpage{#1}%
8984 \else
8985 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8986 \fi
8987 }
8988 \def\@commahyperpage#1{\@@commahyperpage#1, \}
8989 \def\@@commahyperpage#1, #2, #3\{\{%
8990 \ifx\#2\%
8991 \HyInd@pagelink{#1}%
8992 \else
8993 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8994 \fi
8995 }

```

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

```

8996 \def\HyInd@pagelink#1{%
8997 \begingroup
8998 \toks@={}%
8999 \HyInd@removespaces#1 \@nil
9000 \endgroup
9001 }
9002 \def\HyInd@removespaces#1 #2\@nil{%
9003 \toks@=\expandafter{\the\toks@#1}%
9004 \ifx\#2\%
9005 \edef\x{\the\toks@}%
9006 \ifx\x\@empty
9007 \else
9008 \hyperlink{page.\the\toks@}{\the\toks@}%
9009 \fi
9010 \else
9011 \ltx@ReturnAfterFi{%
9012 \HyInd@removespaces#2\@nil
9013 }%
9014 \fi
9015 }

```

45 Compatibility with foiltex

```

9016 \@ifclassloaded{foils}{%
9017 \providecommand*\ext@table{lot}%
9018 \providecommand*\ext@figure{lof}%
9019 }{}

```

46 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (denis.girou@idris.fr).

```

9020 \@ifclassloaded{seminar}{%
9021   \Hy@seminarslidestrue
9022   \providecommand\theHslide{\arabic{slide}}%
9023 }{%
9024   \Hy@seminarslidesfalse
9025 }
9026 \@ifpackageloaded{slidesec}{%
9027   \providecommand\theHslidesection {\arabic{slidesection}}%
9028   \providecommand\theHslidesubsection{%
9029     \theHslidesection.\arabic{slidesubsection}}%
9030 }%
9031 \def\slide@heading[#1]#2{%
9032   \H@refstepcounter{slidesection}%
9033   \@addtoreset{slidesubsection}{slidesection}%
9034   \addtocontents{los}{%
9035     \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
9036     {\@SCTR}{\slideheading.\theslidesection}}%
9037 }%
9038 \def\Hy@tempa{#2}%
9039 \ifx\Hy@tempa\@empty
9040   \else
9041     {%
9042       \edef\@currentlabel{%
9043         \csname p@slidesection\endcsname\theslidesection
9044       }%
9045       \makeslideheading{#2}%
9046     }%
9047   \fi
9048   \gdef\theslideheading{#1}%
9049   \gdef\theslidesubheading{}%
9050   \ifHy@bookmarksnumbered
9051     \def\Hy@slidetitle{\theslidesection\space #1}%
9052   \else
9053     \def\Hy@slidetitle{#1}%
9054   \fi
9055   \ifHy@hypertextnames
9056     \ifHy@naturalnames
9057       \hyper@@anchor{slideheading.\theslidesection}{\relax}%
9058       \Hy@writebookmark
9059         {\theslidesection}%
9060         {\Hy@slidetitle}%
9061         {slideheading.\theslidesection}%
9062         {1}%
9063         {toc}%
9064     \else
9065       \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
9066       \Hy@writebookmark
9067         {\theslidesection}%
9068         {\Hy@slidetitle}%
9069         {slideheading.\theHslidesection}%
9070         {1}%
9071         {toc}%
9072   \fi

```

```

9073 \else
9074 \Hy@GlobalStepCount\Hy@linkcounter
9075 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9076 \Hy@writebookmark
9077 {\theslidesubsection}%
9078 {\Hy@slidetitle}%
9079 {slideheading.\the\Hy@linkcounter}%
9080 {1}%
9081 {toc}%
9082 \fi
9083 }%
9084 \def\slide@subheading[#1]#2{%
9085 \H@refstepcounter{slidesubsection}%
9086 \addtocontents{los}{%
9087 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
9088 {\@SCTR}{slideheading.\theslidesubsection}%
9089 }%
9090 \def\Hy@tempa{#2}%
9091 \ifx\Hy@tempa\@empty
9092 \else
9093 {%
9094 \edef\@currentlabel{%
9095 \csname p@slidesubsection\endcsname\theslidesubsection
9096 }%
9097 \makeslide@subheading{#2}%
9098 }%
9099 \fi
9100 \gdef\theslide@subheading{#1}%
9101 \ifHy@bookmarksnumbered
9102 \def\Hy@slidetitle{\theslidesubsection\space #1}%
9103 \else
9104 \def\Hy@slidetitle{#1}%
9105 \fi
9106 \ifHy@hypertextnames
9107 \ifHy@naturalnames
9108 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
9109 \Hy@writebookmark
9110 {\theslidesubsection}%
9111 {\Hy@slidetitle}%
9112 {slideheading.\theslidesubsection}%
9113 {2}%
9114 {toc}%
9115 \else
9116 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
9117 \Hy@writebookmark
9118 {\theslidesubsection}%
9119 {\Hy@slidetitle}%
9120 {slideheading.\theHslidesubsection}%
9121 {2}%
9122 {toc}%
9123 \fi
9124 \else
9125 \Hy@GlobalStepCount\Hy@linkcounter
9126 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9127 \Hy@writebookmark
9128 {\theslidesubsection}%
9129 {\Hy@slidetitle}%

```

```

9130     {slideheading.\the\Hy@linkcounter}%
9131     {1}%
9132     {toc}%
9133   \fi
9134 }%
9135 \providecommand*\listslidenamename{List of Slides}%
9136 \def\listofslides{%
9137   \section*{%
9138     \listslidenamename
9139     \@mkboth{%
9140       \expandafter\MakeUppercase\listslidenamename
9141     }{%
9142       \expandafter\MakeUppercase\listslidenamename
9143     }%
9144   }%
9145   \def\l@slide##1##2##3##4{%
9146     \slide@undottedcline{%
9147       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
9148     }{%
9149     }%
9150     \let\l@subslide\l@slide
9151     \@startlos
9152   }%
9153   \def\slide@contents{%
9154     \def\l@slide##1##2##3##4{%
9155       \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
9156     }%
9157     \let\l@subslide\@gobblefour
9158     \@startlos
9159   }%
9160   \def\Slide@contents{%
9161     \def\l@slide##1##2##3##4{%
9162       \ifcase\lslide@flag
9163         \message{##1 ** \the\c@slidesection}%
9164         \ifnum##1>\c@slidesection
9165           \def\lslide@flag{1}%
9166           {%
9167             \large
9168             \slide@ccline{%
9169               \slidenumberline{$\Rightarrow\bullet$}%
9170               {\hyperlink{##4}{##2}}%
9171             }{##3}%
9172           }%
9173         \else
9174           {%
9175             \large
9176             \slide@ccline{%
9177               \slidenumberline{$\surd\;\bullet$}%
9178               {\hyperlink{##4}{##2}}%
9179             }{##3}%
9180           }%
9181         \fi
9182       \or
9183       \def\lslide@flag{2}%
9184       {%
9185         \large
9186         \slide@ccline{%

```

```

9187         \slidenumberline{$\bullet$}%
9188         {\hyperlink{##4}{##2}}}%
9189     }{##3}%
9190 }%
9191 \or
9192 {%
9193     \large
9194     \slide@cline{%
9195         \slidenumberline{$\bullet$}%
9196         {\hyperlink{##4}{##2}}}%
9197     }{##3}%
9198 }%
9199 \fi
9200 }%
9201 \def\l@subslide##1##2##3##4{%
9202     \ifnum\lslide@flag=1 %
9203         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
9204     \fi
9205 }%
9206 \def\lslide@flag{0}%
9207 \@startlos
9208 }%
9209 }{}

```

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.)

```

9210 \ifHy@texht
9211     \expandafter\endinput
9212 \fi
9213 \let\real@setref\@setref
9214 \def\@setref#1#2#3{% csname, extract group, refname
9215     \ifx#1\relax
9216         \protect\G@refundefinedtrue
9217         \nfss@text{\reset@font\bfseries ??}%
9218         \@latex@warning{%
9219             Reference `#3' on page \thepage \space undefined%
9220         }%
9221     \else
9222         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9223     \fi
9224 }

```

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

```

9225 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9226     \begingroup
9227     \toks0={\hyper@@link{#5}{#4}}%
9228     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9229     \edef\x{\endgroup
9230         \the\toks0 {\the\toks1 }%
9231     }%
9232     \x
9233 }
9234 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9235     \ifx#1\relax
9236         \protect\G@refundefinedtrue
9237         \nfss@text{\reset@font\bfseries ??}%

```

```

9238 \latex@warning{%
9239   Reference `#3' on page \thepage \space undefined%
9240 }%
9241 \else
9242 \protect\hyper@@link
9243 {\expandafter\@fifthoffive#1}%
9244 {page.\expandafter\@secondoffive#1}%
9245 {\expandafter\@secondoffive#1}%
9246 \fi
9247 }

9248 \end{package}
9249 \check
9250 \checklatex
9251 \checkcommand\def\@setref#1#2#3{%
9252 \ifx#1\relax
9253 \protect\G@refundefinedtrue
9254 \nfss@text{\reset@font\bfseries ??}%
9255 \latex@warning{%
9256   Reference `#3' on page \thepage\space undefined%
9257 }%
9258 \else
9259 \expandafter#2#1\relax
9260 \fi
9261 }
9262 \end{check}
9263 \end{package}

```

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

```

9264 \def\HyRef@StarSetRef#1{%
9265 \begingroup
9266 \Hy@safe@activetrue
9267 \edef\x{#1}%
9268 \@onelevel@sanitize\x
9269 \edef\x{\endgroup
9270 \noexpand\HyRef@@StarSetRef
9271 \expandafter\noexpand\csname r@\x\endcsname{\x}}%
9272 }%
9273 \x
9274 }

9275 \def\HyRef@@StarSetRef#1#2#3{%
9276 \ifx#1\@undefined
9277 \let#1\relax
9278 \fi
9279 \real@setref#1#3{#2}%
9280 }

9281 \def\@refstar#1{%
9282 \HyRef@StarSetRef{#1}\@firstoffive
9283 }

9284 \def\@pagerefstar#1{%
9285 \HyRef@StarSetRef{#1}\@secondoffive
9286 }

9287 \def\@namerefstar#1{%
9288 \HyRef@StarSetRef{#1}\@thirdoffive
9289 }

9290
9291 \Hy@AtBeginDocument{%

```



```

9292 \@ifpackageloaded{varioref}{%
9293   \def\@Refstar#1{%
9294     \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9295   }%
9296   \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9297     \MakeUppercase#1%
9298   }%
9299   \DeclareRobustCommand*\Ref{#1}{%
9300     \@ifstar\@Refstar\HyRef@Ref
9301   }%
9302   \def\HyRef@Ref#1{%
9303     \hyperref[{#1}]{\Ref*{#1}}%
9304   }%

```

Test if we are running new 2019 varioref or old one:

```

9305 %Fmi
9306 \ifdefined\vp@grefstar
9307   \renewcommand\Vref@star[2][]{%
9308     \begingroup
9309     \let\T@pageref\@pagerefstar
9310     \Ref*{#2}
9311     \vpageref[#1]{#2}%
9312   \endgroup
9313 }%
9314 \renewcommand\Vr@f[2][]{%
9315   \begingroup
9316   \let\T@pageref\@pagerefstar
9317   \hyperref[{#2}]{%
9318     \Ref*{#2}
9319     \vpageref[#1]{#2}%
9320   }%
9321   \endgroup
9322 }%
9323 \renewcommand\vr@f[2][]{%
9324   \begingroup
9325   \let\T@pageref\@pagerefstar
9326   \hyperref[{#2}]{%
9327     \ref*{#2}
9328     \vpageref[#1]{#2}%
9329   }%
9330   \endgroup
9331 }%
9332 \renewcommand\vref@star[2][]{%
9333   \begingroup
9334   \let\T@pageref\@pagerefstar
9335   \ref*{#2}
9336   \vpageref[#1]{#2}%
9337   \endgroup
9338 }%

```

old varioref:

```

9339 \else
9340   \def\Vr@f#1{%
9341     \leavevmode\unskip\vref@space
9342     \hyperref[{#1}]{%
9343       \Ref*{#1}%
9344       \let\vref@space\nobreakspace
9345       \@vpageref[\unskip]{#1}%

```

```

9346 }%
9347 }%
9348 \def\vr@f#1{%
9349 \leavevmode\unskip\href@space
9350 \begingroup
9351 \let\T@pageref\@pagerefstar
9352 \hyperref[{#1}]{%
9353 \ref*{#1}%
9354 \vpageref\unskip{#1}%
9355 }%
9356 \endgroup
9357 }%
9358 \fi
9359 %Fmi -end mod
9360 }{}%
9361 }
9362
9363 \DeclareRobustCommand*\autopageref{%
9364 \ifstar{%
9365 \HyRef@autopagerefname\pageref*%
9366 }\HyRef@autopageref
9367 }
9368 \def\HyRef@autopageref#1{%
9369 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9370 }
9371 \def\HyRef@autopagerefname{%
9372 \ltx@ifundefined{pageautorefname}{%
9373 \ltx@ifundefined{pagename}{%
9374 \Hy@Warning{No autoref name for `page'}%
9375 }{%
9376 \pagename\nobreakspace
9377 }%
9378 }{%
9379 \pageautorefname\nobreakspace
9380 }%
9381 }

```

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

```

9382 \DeclareRobustCommand*\autoref{%
9383 \leavevmode
9384 \ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9385 }
9386 \def\HyRef@autoref#1#2{%
9387 \begingroup
9388 \Hy@safe@activetrue
9389 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9390 \endgroup
9391 }
9392 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9393 \HyRef@ShowKeysRef{#2}%
9394 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9395 \edef\HyRef@thisref{%
9396 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9397 }%
9398 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9399 \Hy@safe@activesfalse
9400 #3}%

```

```

9401 \expandafter\@fifthoffive#1\@empty\@empty\@empty
9402 }{%
9403 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9404 }{%
9405 \HyRef@currentHtag
9406 \expandafter\@firstoffive#1\@empty\@empty\@empty
9407 \null
9408 }%
9409 \else
9410 \protect\G@refundefinedtrue
9411 \nfss@text{\reset@font\bfseries ??}%
9412 \@latex@warning{%
9413 Reference `#2' on page \thepage\space undefined%
9414 }%
9415 \fi
9416 }
9417 \def\HyRef@testreftype#1.#2\{\{%
9418 \ltx@ifundefined{#1autorefname}\{%
9419 \ltx@ifundefined{#1name}\{%
9420 \HyRef@StripStar#1\*\@nil{#1}%
9421 \ltx@ifundefined{\HyRef@name autorefname}\{%
9422 \ltx@ifundefined{\HyRef@name name}\{%
9423 \def\HyRef@currentHtag{%
9424 \Hy@Warning{No autoref name for `#1'}%
9425 }{%
9426 \edef\HyRef@currentHtag{%
9427 \expandafter\noexpand\csname\HyRef@name name\endcsname
9428 \noexpand~%
9429 }%
9430 }%
9431 }{%
9432 \edef\HyRef@currentHtag{%
9433 \expandafter\noexpand
9434 \csname\HyRef@name autorefname\endcsname
9435 \noexpand~%
9436 }%
9437 }%
9438 }{%
9439 \edef\HyRef@currentHtag{%
9440 \expandafter\noexpand\csname#1name\endcsname
9441 \noexpand~%
9442 }%
9443 }%
9444 }{%
9445 \edef\HyRef@currentHtag{%
9446 \expandafter\noexpand\csname#1autorefname\endcsname
9447 \noexpand~%
9448 }%
9449 }%
9450 }
9451 \def\HyRef@StripStar#1*\@nil#3{%
9452 \def\HyRef@name{#2}%
9453 \ifx\HyRef@name\HyRef@CaseStar
9454 \def\HyRef@name{#1}%
9455 \else
9456 \def\HyRef@name{#3}%
9457 \fi

```

```

9458 }
9459 \def\HyRef@CaseStar{*\\}
9460 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

9461 \let\HyRef@ShowKeysRef\@gobble
9462 \def\HyRef@ShowKeysInit{%
9463   \begingroup\expandafter\expandafter\expandafter\endgroup
9464   \expandafter\ifx\csname SK@@label\endcsname\relax
9465   \else
9466     \ifx\SK@ref\@empty
9467     \else
9468       \def\HyRef@ShowKeysRef{%
9469         \SK@\SK@@ref
9470       }%
9471     \fi
9472   \fi
9473 }
9474 \@ifpackageloaded{showkeys}{%
9475   \HyRef@ShowKeysInit
9476 }{%
9477   \Hy@AtBeginDocument{%
9478     \@ifpackageloaded{showkeys}{%
9479       \HyRef@ShowKeysInit
9480     }{}%
9481   }%
9482 }

```

Defaults for the names that \autoref uses.

```

9483 \providecommand*\AMSautorefname{\equationautorefname}
9484 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9485 \providecommand*\Itemautorefname{\itemautorefname}
9486 \providecommand*\itemautorefname{item}
9487 \providecommand*\equationautorefname{Equation}
9488 \providecommand*\footnoteautorefname{footnote}
9489 \providecommand*\itemautorefname{item}
9490 \providecommand*\figureautorefname{Figure}
9491 \providecommand*\tableautorefname{Table}
9492 \providecommand*\partautorefname{Part}
9493 \providecommand*\appendixautorefname{Appendix}
9494 \providecommand*\chapterautorefname{chapter}
9495 \providecommand*\sectionautorefname{section}
9496 \providecommand*\subsectionautorefname{subsection}
9497 \providecommand*\subsubsectionautorefname{subsubsection}
9498 \providecommand*\paragraphautorefname{paragraph}
9499 \providecommand*\subparagraphautorefname{subparagraph}
9500 \providecommand*\FancyVerbLineautorefname{line}
9501 \providecommand*\theoremautorefname{Theorem}
9502 \providecommand*\pageautorefname{page}
9503 \end{package}

```

47 Configuration files

47.1 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 pdfTeX offers `\pdfescapestring`.

```
9504 \<pdfTeX|dvipdfm|xetex|vtex|pdfmarkbase|dviwindo>
9505 \begingroup\expandafter\expandafter\expandafter\endgroup
9506 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9507   \begingroup
9508     \catcode`\|=0 %
9509     \@makeother\|%
9510     |@firstofone{|endgroup
9511     |def|Hy@pstringdef#1#2{%
9512       |begingroup
9513         |edef~{|string~}%
9514         |xdef|Hy@gtemp{#2}%
9515       |endgroup
9516       |let#1|Hy@gtemp
9517       |@onelevel@sanitize#1%
9518       |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
9519       |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9520       |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9521     }%
9522     |def|Hy@ExchangeBackslash#1|#2|@nil{%
9523       #1%
9524       |ifx|\#2|\%
9525       |else
9526         \\\%
9527         |ltx@ReturnAfterFi{%
9528           |Hy@ExchangeBackslash#2|@nil
9529         }%
9530       |fi
9531     }%
9532   }%
9533   \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9534     #1%
9535     \ifx\#2\%
9536     \else
9537       \@backslashchar(%
9538       \ltx@ReturnAfterFi{%
9539         \Hy@ExchangeLeftParenthesis#2\@nil
9540       }%
9541     \fi
9542   }%
9543   \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9544     #1%
9545     \ifx\#2\%
9546     \else
9547       \@backslashchar)%
9548       \ltx@ReturnAfterFi{%
9549         \Hy@ExchangeRightParenthesis#2\@nil
```

```

9550 }%
9551 \fi
9552 }%
9553 \else
9554 \def\Hy@pstringdef#1#2{%
9555 \begingroup
9556 \edef~{\string~}%
9557 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9558 \endgroup
9559 \let#1\Hy@gtemp
9560 }%
9561 \fi
9562 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9563 <*pdfTeX>
9564 \providecommand*\XR@ext}{pdf}
9565 \Hy@setbreaklinks{true}
9566 \def\HyPat@ObjRef{%
9567 [0-9]*[1-9][0-9]* 0 R%
9568 }

```

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

```

9569 \let\Hy@pdfminorversion\relax
9570 \begingroup\expandafter\expandafter\expandafter\endgroup
9571 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9572 \begingroup\expandafter\expandafter\expandafter\endgroup
9573 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9574 \else
9575 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9576 \fi
9577 \else
9578 \def\Hy@pdfminorversion{\pdfminorversion}%
9579 \fi
9580 \@ifundefined{Hy@pdfminorversion}{%
9581 \PackageInfo{hyperref}{%
9582 PDF version is not set, because pdfTeX is too old (<1.10a)%
9583 }%
9584 }{%
9585 \ifHy@ocgcolorlinks
9586 \ifnum\Hy@pdfmajorminor@version<105 %
9587 \kvsetkeys{Hyp}{pdfversion=1.5}%
9588 \fi
9589 \fi
9590 \ifHy@setpdfversion
9591 \ifnum\Hy@pdf@majorminor@version<105 %
9592 \ltx@ifundefined{pdfobjcompresslevel}{%
9593 }{%
9594 \ifHy@verbose
9595 \Hy@InfoNoLine{%

```

```

9596         PDF object streams are disabled, because they are%
9597         \MessageBreak
9598         not supported in requested PDF version %
9599         \Hy@pdf@majorversion.\Hy@pdf@minorversion
9600     }%
9601     \fi
9602     \pdfobjcompresslevel=\ltx@zero
9603 }%
9604 \fi
9605 \ifnum\Hy@pdfmajorminor@version=\Hy@pdf@majorminor@version\relax
9606 \else
9607     \let\Hy@temp\ltx@empty
9608     \def\Hy@temp@A#1#2{%
9609         \ifnum#1>\ltx@zero
9610             \edef\Hy@temp{%
9611                 \Hy@temp
9612                 \space\space
9613                 \the#1\space #2%
9614                 \ifnum#1=\ltx@one\else s\fi
9615                 \MessageBreak
9616             }%
9617         \fi
9618     }%
9619     \Hy@temp@A\pdflastobj{PDF object}%
9620     \Hy@temp@A\pdflastxform{form XObject}%
9621     \Hy@temp@A\pdflastximage{image XObject}%
9622     \Hy@temp@A\pdflastannot{annotation}%
9623     \ltx@ifundefined{pdflastlink}{%
9624     }{%
9625         \Hy@temp@A\pdflastlink{link}%
9626     }%
9627     \ifx\Hy@temp\ltx@empty
9628         \Hy@pdfmajorversion=\Hy@pdf@majorversion\relax
9629         \Hy@pdfminorversion=\Hy@pdf@minorversion\relax
9630     \else
9631         \let\Hy@temp@A\ltx@empty
9632         \ifnum\Hy@pdf@majorminor@version=104 %
9633             \IfFileExists{pdf14.sty}{%
9634                 \def\Hy@temp@A{%
9635                     \MessageBreak
9636                     Or \string\RequirePackage{pdf14} can be used%
9637                     \MessageBreak
9638                     before \string\documentclass\space as shortcut%
9639                 }%
9640             }{}%
9641         \fi
9642         \Hy@WarningNoLine{%
9643             The PDF version number could not be set,\MessageBreak
9644             because some PDF objects are already written:%
9645             \MessageBreak
9646             \Hy@temp
9647             The version should be set as early as possible:%
9648             \MessageBreak
9649             \space\space
9650             \expandafter\string\Hy@pdfmajorversion=\Hy@pdf@majorversion, %
9651             \expandafter\string\Hy@pdfminorversion=\Hy@pdf@minorversion
9652             \string\relax

```

```

9653     \ifnum\Hy@pdf@major@minor@version<105 %
9654     \ltx@ifundefined{pdfobjcompresslevel}{%
9655     }{%
9656         \MessageBreak
9657         \space\space
9658         \string\pdfobjcompresslevel=0\string\relax
9659     }%
9660     \fi
9661     \Hy@temp@A
9662 }%
9663 \fi
9664 \fi
9665 \PackageInfo{hyperref}{%
9666     \expandafter\string\Hy@pdf@major@version.%
9667     \expandafter\string\Hy@pdf@minor@version
9668     :=\number\Hy@pdf@major@version.\number\Hy@pdf@minor@version\space
9669 }%
9670 \fi
9671 \edef\Hy@pdf@major@version{\number\Hy@pdf@major@version}%
9672 \edef\Hy@pdf@minor@version{\number\Hy@pdf@minor@version}%
9673 }
9674 \Hy@DisableOption{pdfversion}%
9675 \ifHy@ocgcolorlinks
9676     \pdf@ifdraftmode{}{%
9677         \immediate\pdfobj{%
9678             <<%
9679             /Type/OCG%
9680             /Name(View)%
9681             /Usage<<%
9682             /Print<<%
9683             /PrintState/OFF%
9684             >>%
9685             /View<<%
9686             /ViewState/ON%
9687             >>%
9688             >>%
9689             >>%
9690         }%
9691         \edef\OBJ@OCG@view{\the\pdf@lastobj\space 0 R}%
9692         \immediate\pdfobj{%
9693             <<%
9694             /Type/OCG%
9695             /Name(Print)%
9696             /Usage<<%
9697             /Print<<%
9698             /PrintState/ON%
9699             >>%
9700             /View<<%
9701             /ViewState/OFF%
9702             >>%
9703             >>%
9704             >>%
9705         }%
9706         \edef\OBJ@OCG@print{\the\pdf@lastobj\space 0 R}%
9707         \immediate\pdfobj{%
9708             [%
9709             \OBJ@OCG@view\space\OBJ@OCG@print

```



```

9710 ]%
9711 }%
9712 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
9713 \pdfcatalog{%
9714   /OCProperties<<%
9715     /OCGs \OBJ@OCGs
9716   /D<<%
9717     /OFF[\OBJ@OCG@print]%
9718   /AS[%
9719     <<%
9720       /Event/View%
9721     /OCGs \OBJ@OCGs
9722     /Category[/View]%
9723   >>%
9724   <<%
9725     /Event/Print%
9726   /OCGs \OBJ@OCGs
9727   /Category[/Print]%
9728   >>%
9729   <<%
9730     /Event/Export%
9731   /OCGs \OBJ@OCGs
9732   /Category[/Print]%
9733   >>%
9734 ]%
9735 >>%
9736 >>%
9737 }%
9738 \beginngroup
9739 \edef\x{\endgroup
9740   \pdfpageresources{%
9741     \the\pdfpageresources
9742     /Properties<<%
9743       /OCView \OBJ@OCG@view
9744     /OCPrint \OBJ@OCG@print
9745   >>%
9746   }%
9747 }%
9748 \x
9749 }%
9750 \Hy@AtBeginDocument{%
9751   \def\Hy@colorlink#1{%
9752     \beginngroup
9753     \ifHy@ocgcolorlinks
9754       \def\Hy@ocgcolor{#1}%
9755       \setbox0=\hbox\bgroup\color@beginngroup
9756     \else
9757       \HyColor@UseColor#1%
9758     \fi
9759   }%
9760   \def\Hy@endcolorlink{%
9761     \ifHy@ocgcolorlinks
9762       \color@endgroup\egroup
9763     \mbox{%
9764       \pdfliteral page{/OC/OCPrint BDC}%
9765       \rlap{\copy0}%
9766       \pdfliteral page{EMC/OC/OCView BDC}%

```

```

9767      \begingroup
9768      \expandafter\HyColor@UseColor\Hy@ocgcolor
9769      \box0 %
9770      \endgroup
9771      \pdfiternal page{EMC}%
9772  }%
9773  \fi
9774  \endgroup
9775  }%
9776  }%
9777  \else
9778  \Hy@DisableOption{ocgcolorlinks}%
9779  \fi

```

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

```

9780 \def\setpdfinkmargin#1{%
9781  \begingroup
9782  \setlength{\dimen@}{#1}%
9783  \expandafter\endgroup
9784  \expandafter\pdfinkmargin\the\dimen@\relax
9785 }
9786 \ifx\pdfstartlink\@undefined% less than version 14
9787  \let\pdfstartlink\pdfannotlink
9788  \let\pdfinkmargin\@tempdima
9789  \let\pdfxform\pdfform
9790  \let\pdfastxform\pdfastform
9791  \let\pdfrefxform\pdfrefform
9792 \else
9793  \pdfinkmargin1pt %
9794 \fi

```

First set up the default linking

```

9795 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9796 \Hy@WrapperDef\new@pdfink#1{%
9797  \ifhmode
9798  \@savsf\spacefactor
9799  \fi
9800  \Hy@SaveLastskip
9801  \Hy@VerboseAnchor{#1}%
9802  \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9803  \Hy@DestName\Hy@pstringDest\@pdfview
9804  \Hy@RestoreLastskip
9805  \ifhmode
9806  \spacefactor\@savsf
9807  \fi
9808 }
9809 \let\pdf@endanchor\@empty

```

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

```

9810 \def\Hy@DestName#1#2{%
9811  \pdfdest name{#1}#2\relax
9812 }

```

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.

```

9813 \providecommand*\pdfborder{0 0 1}
9814 \providecommand*\pdfborderstyle{}
9815 \def\Hy@undefinedname{UNDEFINED}
9816 \def\find@pdfink#1#2{%
9817   \leavevmode
9818   \protected@edef\Hy@testname{#2}%
9819   \ifx\Hy@testname\@empty
9820     \Hy@Warning{%
9821       Empty destination name,\MessageBreak
9822       using '\Hy@undefinedname'%
9823     }%
9824     \let\Hy@testname\Hy@undefinedname
9825   \else
9826     \Hy@pstringdef\Hy@testname{%
9827       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9828     }%
9829   \fi
9830   \Hy@StartlinkName{%
9831     \ifHy@pdfa /F 4\fi
9832     \Hy@setpdfborder
9833     \Hy@setpdfhighlight
9834     \ifx\CurrentBorderColor\relax
9835     \else
9836       /C[\CurrentBorderColor]%
9837     \fi
9838   }\Hy@testname
9839   \expandafter\Hy@colorlink\csname @#1color\endcsname
9840 }
9841 \def\Hy@StartlinkName#1#2{%
9842   \pdfstartlink attr{#1}goto name{#2}\relax
9843 }
9844 \def\close@pdfink{%
9845   \Hy@endcolorlink
9846   \Hy@VerboseLinkStop
9847   \pdfendlink
9848 }
9849 \def\hyper@anchor#1{%
9850   \new@pdfink{#1}\anchor@spot\pdf@endanchor
9851 }
9852 \def\hyper@anchorstart#1{%
9853   \new@pdfink{#1}%
9854   \Hy@activeanchortrue
9855 }
9856 \def\hyper@anchorend{%
9857   \pdf@endanchor
9858   \Hy@activeanchorfalse
9859 }
9860 \def\hyper@linkstart#1#2{%
9861   \Hy@VerboseLinkStart{#1}{#2}%
9862   \ltx@ifundefined{#1bordercolor}{%
9863     \let\CurrentBorderColor\relax
9864   }{%
9865     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9866   }%
9867   \find@pdfink{#1}{#2}%

```

```

9868 }
9869 \def\hyper@linkend{\close@pdfink}
9870 \def\hyper@link#1#2#3{%
9871   \Hy@VerboseLinkStart{#1}{#2}%
9872   \ltx@ifundefined{#@1bordercolor}{%
9873     \let\CurrentBorderColor\relax
9874   }{%
9875     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9876   }%
9877   \find@pdfink{#1}{#2}#3\Hy@xspace@end
9878   \close@pdfink
9879 }
9880 \let\CurrentBorderColor\@linkbordercolor
9881 \def\hyper@linkurl#1#2{%
9882   \begingroup
9883     \Hy@pstringdef\Hy@pstringURI{#2}%
9884     \hyper@chars
9885     \leavevmode
9886     \pdfstartlink
9887       attr{%
9888         \Hy@setpdfborder
9889         \Hy@setpdfhighlight
9890         \ifx\@urlbordercolor\relax
9891           \else
9892             /C[\@urlbordercolor]%
9893         \fi
9894       }%
9895       user{%
9896         /Subtype/Link%
9897         \ifHy@pdfa /F 4\fi
9898         /A<<%
9899         /Type/Action%
9900         /S/URI%
9901         /URI(\Hy@pstringURI)%
9902         \ifHy@href@ismap
9903           /IsMap true%
9904         \fi
9905         \Hy@href@nextactionraw
9906       >>%
9907     }%
9908     \relax
9909     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9910     \close@pdfink
9911   \endgroup
9912 }
9913 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9914   \begingroup
9915     \def\Hy@pstringF{#2}%
9916     \Hy@CleanupFile\Hy@pstringF
9917     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9918     \Hy@pstringdef\Hy@pstringD{#3}%
9919     \Hy@MakeRemoteAction
9920     \leavevmode
9921     \pdfstartlink
9922       attr{%
9923         \Hy@setpdfborder
9924         \Hy@setpdfhighlight

```

```

9925     \ifx\@filebordercolor\relax
9926     \else
9927     /C[\@filebordercolor]%
9928     \fi
9929 }%
9930 user {%
9931     /Subtype/Link%
9932     \ifHy@pdfa /F 4\fi
9933     /A<<%
9934     /F(\Hy@pstringF)%
9935     /S/GoToR%
9936     \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}

```

```

9937     \ifx\#3\%
9938     /D[\Hy@href@page\@pdfremotestartview]%
9939     \else
9940     /D(\Hy@pstringD)%
9941     \fi
9942     \Hy@href@nextactionraw
9943     >>%
9944     }%
9945     \relax
9946     \Hy@colorlink\@filecolor#1\Hy@xspace@end
9947     \close@pdflink
9948 \endgroup
9949 }
9950 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9951 \begingroup
9952   \Hy@pstringdef\Hy@pstringF{#1}%
9953   \Hy@pstringdef\Hy@pstringP{#3}%
9954   \leavevmode
9955   \pdfstartlink
9956   attr{%
9957     \Hy@setpdfborder
9958     \Hy@setpdfhighlight
9959     \ifx\@runbordercolor\relax
9960     \else
9961     /C[\@runbordercolor]%
9962     \fi
9963   }%
9964   user {%
9965     /Subtype/Link%
9966     \ifHy@pdfa /F 4\fi
9967     /A<<%
9968     /F(\Hy@pstringF)%
9969     /S/Launch%

```

```

9970      \Hy@SetNewWindow
9971      \ifx\|#3\%
9972      \else
9973          /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9974      \fi
9975      \Hy@href@nextactionraw
9976      >>%
9977      }%
9978      \relax
9979      \Hy@colorlink\@runcolor#2\Hy@xspace@end
9980      \close@pdflink
9981      \endgroup
9982  }

```

\PDF@SetupDox

```

9983 \def\PDF@SetupDoc{%
9984   \ifx\@pdfpagescrop\@empty
9985   \else
9986     \edef\process@me{%
9987       \pdfpagesattr={%
9988         /CropBox[\@pdfpagescrop]%
9989         \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
9990         \else
9991           ^^J\the\pdfpagesattr
9992         \fi
9993       }%
9994     }%
9995     \process@me
9996   \fi
9997   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9998   \pdfcatalog{%
9999     /PageMode/\@pdfpagemode
10000   \ifx\@baseurl\@empty
10001   \else
10002     /URI<</Base(\Hy@pstringB)>>%
10003   \fi
10004 }%
10005 \ifx\@pdfstartpage\@empty
10006 \else
10007   \ifx\@pdfstartview\@empty
10008   \else
10009     openaction goto page\@pdfstartpage{\@pdfstartview}%
10010   \fi
10011 \fi
10012 \edef\Hy@temp{%
10013   \ifHy@pdftoolbar\else /HideToolbar true\fi
10014   \ifHy@pdfmenubar\else /HideMenubar true\fi
10015   \ifHy@pdfwindowui\else /HideWindowUI true\fi
10016   \ifHy@pdffitwindow /FitWindow true\fi
10017   \ifHy@pdfcenterwindow /CenterWindow true\fi
10018   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10019   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10020   \Hy@UseNameKey{Direction}\@pdfdirection
10021   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10022   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10023   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10024   \Hy@UseNameKey{PrintClip}\@pdfprintclip

```

```

10025 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10026 \Hy@UseNameKey{Duplex}\@pdfduplex
10027 \ifx\@pdfpicktraybypdfsize\@empty
10028 \else
10029 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10030 \fi
10031 \ifx\@pdfprintpagerange\@empty
10032 \else
10033 /PrintPageRange[\@pdfprintpagerange]%
10034 \fi
10035 \ifx\@pdfnumcopies\@empty
10036 \else
10037 /NumCopies \@pdfnumcopies
10038 \fi
10039 }%
10040 \pdfcatalog{%
10041 \ifx\Hy@temp\@empty
10042 \else
10043 /ViewerPreferences<<\Hy@temp>>%
10044 \fi
10045 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10046 \ifx\@pdflang\relax
10047 \else
10048 /Lang(\@pdflang)%
10049 \fi
10050 }%
10051 }

```

\PDF@FinishDoc

```

10052 \def\PDF@FinishDoc{%
10053 \pdf@ifdraftmode{ }{%
10054 \Hy@UseMaketitleInfos
10055 \HyInfo@GenerateAddons
10056 \pdfinfo{%
10057 /Author(\@pdfauthor)%
10058 /Title(\@pdftitle)%
10059 /Subject(\@pdfsubject)%
10060 /Creator(\@pdfcreator)%
10061 \ifx\@pdfcreationdate\@empty
10062 \else
10063 /CreationDate(\@pdfcreationdate)%
10064 \fi
10065 \ifx\@pdfmoddate\@empty
10066 \else
10067 /ModDate(\@pdfmoddate)%
10068 \fi
10069 \ifx\@pdfproducer\relax
10070 \else
10071 /Producer(\@pdfproducer)%
10072 \fi
10073 /Keywords(\@pdfkeywords)%
10074 \ifx\@pdftrapped\@empty
10075 \else
10076 /Trapped/\@pdftrapped
10077 \fi
10078 \HyInfo@Addons
10079 }%
10080 }%

```

```

10081 \Hy@DisableOption{pdfauthor}%
10082 \Hy@DisableOption{pdftitle}%
10083 \Hy@DisableOption{pdfsubject}%
10084 \Hy@DisableOption{pdfcreator}%
10085 \Hy@DisableOption{addtopdfcreator}%
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 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

10093 \def\hyper@pagetransition{%
10094   \ifx\@pdfpagetransition\relax
10095   \else
10096     \expandafter\Hy@RemoveTransPageAttr
10097     \the\pdfpageattr^^J/Trans{}>>\END
10098     \ifx\@pdfpagetransition\@empty
10099     \else
10100       \edef\@processme{%
10101         \global\pdfpageattr{%
10102           \the\pdfpageattr
10103           ^^J/Trans << /S /\@pdfpagetransition\space >>%
10104         }%
10105       }%
10106       \@processme
10107     \fi
10108   \fi
10109 }

```

`\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.

```

10110 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10111   \ifx\\#2\\%
10112     \global\pdfpageattr{#1}%
10113   \else
10114     \Hy@RemoveTransPageAttr#1#4\END
10115   \fi
10116 }

```

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

```

10117 \def\hyper@pageduration{%
10118   \ifx\@pdfpageduration\relax
10119   \else
10120     \expandafter
10121     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10122     \ifx\@pdfpageduration\@empty

```



```

10123 \else
10124 \edef\@processme{%
10125 \global\pdfpageattr{%
10126 \the\pdfpageattr
10127 ^^J/Dur \@pdfpageduration\space
10128 }%
10129 }%
10130 \@processme
10131 \fi
10132 \fi
10133 }

```

\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.

```

10134 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10135 \ifx\#2\%
10136 \global\pdfpageattr{#1}%
10137 \else
10138 \Hy@RemoveDurPageAttr#1#4\END
10139 \fi
10140 }

```

\hyper@pagehidden The boolean value of the key **/Hid** is stored in switch **\ifHy@pdfpagehidden**. First previous **/Hid** entries are removed, then the new one is appended, if the value is true (the PDF default is false).

```

10141 \def\hyper@pagehidden{%
10142 \ifHy@useHidKey
10143 \expandafter
10144 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
10145 \ifHy@pdfpagehidden
10146 \edef\@processme{%
10147 \global\pdfpageattr{%
10148 \the\pdfpageattr
10149 ^^J/Hid true % SPACE
10150 }%
10151 }%
10152 \@processme
10153 \fi
10154 \fi
10155 }

```

\Hy@RemoveHidPageAttr Macro **\Hy@RemoveHidPageAttr** removes a **/Hid** entry from **\pdfpageattr**. It is called with the end marker **^^J/Hid{} \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 **/Hid** object or the end marker.

```

10156 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10157 \ifx\#2\%
10158 \global\pdfpageattr{#1}%
10159 \else
10160 \Hy@RemoveHidPageAttr#1#4\END
10161 \fi
10162 }

```

```

10163 \pdf@ifdraftmode{}{%
10164 \g@addto@macro\Hy@EveryPageHook{%

```

```

10165 \hyper@pagetransition
10166 \hyper@pageduration
10167 \hyper@pagehidden
10168 }%
10169 }

```

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

```

10170 </pdfTeX>
10171 <*pdfTeX | xetex>
10172 \Hy@AtBeginDocument{%
10173   \ifHy@setpagesize
10174     \expandafter\@firstofone
10175   \else
10176     \expandafter\@gobble
10177   \fi
10178   {%
10179     \@ifclassloaded{seminar}{%
10180 (*pdfTeX)
10181   \setlength{\pdfhorigin}{1truein}%
10182   \setlength{\pdfvorigin}{1truein}%
10183 </pdfTeX>
10184   \ifportrait
10185     \ifdim\paperwidth=\z@
10186     \else
10187       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10188     \fi
10189     \ifdim\paperheight=\z@
10190     \else
10191       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10192     \fi
10193   \else
10194     \ifdim\paperheight=\z@
10195     \else
10196       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10197     \fi
10198     \ifdim\paperwidth=\z@
10199     \else
10200       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10201     \fi
10202   \fi
10203 }{%
10204 \ltx@ifundefined{stockwidth}{%
10205   \ifdim\paperwidth>\z@
10206     \setlength{\pdfpagewidth}{\paperwidth}%
10207   \fi
10208   \ifdim\paperheight>\z@
10209     \setlength{\pdfpageheight}{\paperheight}%
10210   \fi
10211 }{%
10212   \ifdim\stockwidth>\z@
10213     \setlength{\pdfpagewidth}{\stockwidth}%
10214   \fi
10215   \ifdim\stockheight>\z@
10216     \setlength{\pdfpageheight}{\stockheight}%
10217   \fi
10218 }%
10219 }%

```

```

10220 }%
10221 \Hy@DisableOption{setpagesize}%
10222 }
10223 </pdfTeX | xetex>
10224 <*pdfTeX>
10225 \def\Acrobatmenu#1#2{%
10226 \Hy@Acrobatmenu{#1}{#2}{%
10227 \leavevmode
10228 \EdefEscapeName\Hy@temp@menu{#1}%
10229 \pdfstartlink
10230 attr{%
10231 \Hy@setpdfborder
10232 \Hy@setpdfhighlight
10233 \ifx\@menubordercolor\relax
10234 \else
10235 /C[\@menubordercolor]%
10236 \fi
10237 }%
10238 user{%
10239 /Subtype/Link%
10240 \ifHy@pdfa /F 4\fi
10241 /A<<%
10242 /S/Named%
10243 /N/\Hy@temp@menu
10244 \Hy@href@nextactionraw
10245 >>%
10246 }%
10247 \relax
10248 \Hy@colorlink\@mencolor#2%
10249 \close@pdflink
10250 }%
10251 }

```

47.2.1 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.

```

10252 \def\Hy@FixNotFirstPage{%
10253 \gdef\Hy@FixNotFirstPage{%
10254 \setbox\AtBeginShipoutBox=\hbox{%
10255 \copy\AtBeginShipoutBox
10256 }%
10257 }%
10258 }
10259 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
10260 }{%
10261 \AtBeginShipout{\Hy@FixNotFirstPage}%
10262 }
10263 </pdfTeX>

```

47.3 hypertext

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: `html:`

name: `html:`

end: `html:`

image: `html:`

base_name: `html:<base href = "href_string">`

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```
10264 \*hypertext
10265 \providecommand*\XR@ext}{dvi}
10266 \let\PDF@FinishDoc\ltx@empty
10267 \def\PDF@SetupDoc{%
10268   \ifx\@baseurl\@empty
10269   \else
10270     \special{html:<base href="\@baseurl">}%
10271   \fi
10272 }
10273 \Hy@WrapperDef\hyper@anchor#1{%
10274   \Hy@SaveLastskip
10275   \Hy@VerboseAnchor{#1}%
10276   \begingroup
10277     \let\protect=\string
10278     \hyper@chars
10279     \special{html:<a name=%
10280       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10281   \endgroup
10282   \Hy@activeanchortrue
10283   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10284   \special{html:</a>}%
10285   \Hy@activeanchorfalse
10286   \Hy@RestoreLastskip
```

```

10287 }
10288 \Hy@WrapperDef\hyper@anchorstart#1{%
10289 \Hy@SaveLastskip
10290 \Hy@VerboseAnchor{#1}%
10291 \begingroup
10292 \hyper@chars
10293 \special{html:<a name=%
10294 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10295 \endgroup
10296 \Hy@activeanchortrue
10297 }
10298 \def\hyper@anchorend{%
10299 \special{html:</a>}%
10300 \Hy@activeanchorfals
10301 \Hy@RestoreLastskip
10302 }
10303 \def\@urltype{url}
10304 \def\hyper@linkstart#1#2{%
10305 \Hy@VerboseLinkStart{#1}{#2}%
10306 \expandafter\Hy@colorlink\csname @#1color\endcsname
10307 \def\Hy@tempa{#1}%
10308 \ifx\Hy@tempa\@urltype
10309 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10310 \else
10311 \begingroup
10312 \hyper@chars
10313 \special{html:<a href=%
10314 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10315 \endgroup
10316 \fi
10317 }
10318 \def\hyper@linkend{%
10319 \special{html:</a>}%
10320 \Hy@endcolorlink
10321 }
10322 \def\hyper@linkfile#1#2#3{%
10323 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
10324 }
10325 \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.

```

10326 \leavevmode
10327 \ifHy@raiselinks
10328 \Hy@SaveSpaceFactor
10329 \Hy@SaveSavedSpaceFactor
10330 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10331 \Hy@RestoreSavedSpaceFactor
10332 \@linkdim\dp\@tempboxa
10333 \lower\@linkdim\hbox{%
10334 \hyper@chars
10335 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10336 }%
10337 \Hy@colorlink\@urlcolor
10338 \Hy@RestoreSpaceFactor
10339 #1%
10340 \Hy@SaveSpaceFactor

```

```
10341 \@linkdim\ht\@tempboxa
```

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

```
10342 \advance\@linkdim by -6.5\p@
10343 \raise\@linkdim\hbox{\special{html:</a>}}%
10344 \Hy@endcolorlink
10345 \Hy@RestoreSpaceFactor
10346 \else
10347 \begingroup
10348 \hyper@chars
10349 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10350 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10351 \special{html:</a>}%
10352 \Hy@endcolorlink
10353 \endgroup
10354 \fi
10355 }
```

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

```
10356 \def\hyper@link#1#2#3{%
10357 \Hy@VerboseLinkStart{#1}{#2}%
10358 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
10359 }

10360 \def\hyper@image#1#2{%
10361 \begingroup
10362 \hyper@chars
10363 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10364 \endgroup
10365 }
10366 </hypertex>
10367 <*dviwindo>
```

47.4 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`, \TeX 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.

```
10368 \providecommand*\XR@ext}{dvi}
10369 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10370 \Hy@WrapperDef\hyper@anchor#1{%
10371 \Hy@SaveLastskip
10372 \Hy@VerboseAnchor{#1}%
10373 \begingroup
10374 \let\protect=\string
10375 \special{mark: #1}%
10376 \endgroup
```

```

10377 \Hy@activeanchortrue
10378 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10379 \Hy@activeanchorfalse
10380 \Hy@RestoreLastskip
10381 }
10382 \Hy@WrapperDef\hyper@anchorstart#1{%
10383 \Hy@SaveLastskip
10384 \Hy@VerboseAnchor{#1}%
10385 \special{mark: #1}%
10386 \Hy@activeanchortrue
10387 }
10388 \def\hyper@anchorend{%
10389 \Hy@activeanchorfalse
10390 \Hy@RestoreLastskip
10391 }
10392 \def\hyper@linkstart#1#2{%
10393 \Hy@VerboseLinkStart{#1}{#2}%
10394 \expandafter\Hy@colorlink\csname @#1color\endcsname
10395 \special{button: %
10396 10000000 %
10397 \number\baselineskip\space
10398 #2%
10399 }%
10400 }
10401 \def\hyper@linkend{%
10402 \Hy@endcolorlink
10403 }
10404 \def\hyper@link#1#2#3{%
10405 \Hy@VerboseLinkStart{#1}{#2}%
10406 \leavevmode
10407 \ifHy@raiselinks
10408 \Hy@SaveSpaceFactor
10409 \Hy@SaveSavedSpaceFactor
10410 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10411 \Hy@RestoreSavedSpaceFactor
10412 \@linkdim\dp\@tempboxa
10413 \lower\@linkdim\hbox{%
10414 \special{button: %
10415 \number\wd\@tempboxa\space
10416 \number\ht\@tempboxa\space
10417 #2%
10418 }%
10419 \expandafter\Hy@colorlink\csname @#1color\endcsname
10420 \Hy@RestoreSpaceFactor
10421 #3\Hy@xspace@end
10422 \Hy@SaveSpaceFactor
10423 \Hy@endcolorlink
10424 }%
10425 \@linkdim\ht\@tempboxa
10426 \advance\@linkdim by -6.5\p@
10427 \raise\@linkdim\hbox{}}%
10428 \Hy@RestoreSpaceFactor
10429 \else
10430 \special{button: %
10431 \number\wd\@tempboxa\space
10432 \number\ht\@tempboxa\space
10433 #2%

```

```

10434 }%
10435 \expandafter\Hy@colorlink\csname @#1color\endcsname
10436 #3\Hy@xspace@end
10437 \Hy@endcolorlink
10438 \fi
10439 }
10440 \def\hyper@linkurl#1#2{%
10441 \begingroup
10442 \hyper@chars
10443 \leavevmode
10444 \ifHy@raiselinks
10445 \Hy@SaveSpaceFactor
10446 \Hy@SaveSavedSpaceFactor
10447 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10448 \Hy@RestoreSavedSpaceFactor
10449 \@linkdim\dp\@tempboxa
10450 \lower\@linkdim\hbox{%
10451 \special{button: %
10452 \number\wd\@tempboxa\space
10453 \number\ht\@tempboxa\space
10454 launch: \wwwbrowser\space
10455 #2%
10456 }%
10457 \Hy@colorlink\@urlcolor
10458 \Hy@RestoreSpaceFactor
10459 #1\Hy@xspace@end
10460 \Hy@SaveSpaceFactor
10461 \Hy@endcolorlink
10462 }%
10463 \@linkdim\ht\@tempboxa
10464 \advance\@linkdim by -6.5\p@
10465 \raise\@linkdim\hbox{}}%
10466 \Hy@RestoreSpaceFactor
10467 \else
10468 \special{button: %
10469 \number\wd\@tempboxa\space
10470 \number\ht\@tempboxa\space
10471 launch: \wwwbrowser\space
10472 #2%
10473 }%
10474 \Hy@colorlink\@urlcolor
10475 #1\Hy@xspace@end
10476 \Hy@endcolorlink
10477 \fi
10478 \endgroup
10479 }
10480 \def\hyper@linkfile#1#2#3{%
10481 \begingroup
10482 \hyper@chars
10483 \leavevmode
10484 \ifHy@raiselinks
10485 \Hy@SaveSpaceFactor
10486 \Hy@SaveSavedSpaceFactor
10487 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10488 \Hy@RestoreSavedSpaceFactor
10489 \@linkdim\dp\@tempboxa
10490 \lower\@linkdim\hbox{%

```



```

10491 \special{button: %
10492 \number\wd\@tempboxa\space
10493 \number\ht\@tempboxa\space
10494 #3,%
10495 file: #2%
10496 }%
10497 \Hy@colorlink\@filecolor
10498 \Hy@RestoreSpaceFactor
10499 #1\Hy@xspace@end
10500 \Hy@SaveSpaceFactor
10501 \Hy@endcolorlink
10502 }%
10503 \@linkdim\ht\@tempboxa
10504 \advance\@linkdim by -6.5\p@
10505 \raise\@linkdim\hbox{}%
10506 \Hy@RestoreSpaceFactor
10507 \else
10508 \special{button: %
10509 \number\wd\@tempboxa\space
10510 \number\ht\@tempboxa\space
10511 #3,%
10512 file: #2%
10513 }%
10514 \Hy@colorlink\@filecolor
10515 #1\Hy@xspace@end
10516 \Hy@endcolorlink
10517 \fi
10518 \endgroup
10519 }
10520 \HyInfo@AddonUnsupportedtrue
10521 \def\PDF@FinishDoc{%
10522 \Hy@UseMaketitleInfos
10523 \HyInfo@TrappedUnsupported
10524 \special{PDF: Keywords \@pdfkeywords}%
10525 \special{PDF: Title \@pdftitle}%
10526 \special{PDF: Creator \@pdfcreator}%
10527 \ifx\@pdfcreationdate\@empty
10528 \else
10529 \special{PDF: CreationDate \@pdfcreationdate}%
10530 \fi
10531 \ifx\@pdfmoddate\@empty
10532 \else
10533 \special{PDF: ModDate \@pdfmoddate}%
10534 \fi
10535 \special{PDF: Author \@pdfauthor}%
10536 \ifx\@pdfproducer\relax
10537 \else
10538 \special{PDF: Producer \@pdfproducer}%
10539 \fi
10540 \special{PDF: Subject \@pdfsubject}%
10541 \Hy@DisableOption{pdfauthor}%
10542 \Hy@DisableOption{pdftitle}%
10543 \Hy@DisableOption{pdfsubject}%
10544 \Hy@DisableOption{pdfcreator}%
10545 \Hy@DisableOption{addtopdfcreator}%
10546 \Hy@DisableOption{pdfcreationdate}%
10547 \Hy@DisableOption{pdfcreationdate}%

```

```

10548 \Hy@DisableOption{pdfmoddate}%
10549 \Hy@DisableOption{pdfproducer}%
10550 \Hy@DisableOption{pdfkeywords}%
10551 \Hy@DisableOption{pdftrapped}%
10552 \Hy@DisableOption{pdfinfo}%
10553 }
10554 \def\PDF@SetupDoc{%
10555 \ifx\@baseurl\@empty
10556 \else
10557 \special{PDF: Base \@baseurl}%
10558 \fi
10559 \ifx\@pdfpagescrop\@empty\else
10560 \special{PDF: BBox \@pdfpagescrop}%
10561 \fi
10562 \def\Hy@temp{}%
10563 \ifx\@pdfstartpage\@empty
10564 \else
10565 \ifx\@pdfstartview\@empty
10566 \else
10567 \edef\Hy@temp{%
10568 ,Page=\@pdfstartpage
10569 ,View=\@pdfstartview
10570 }%
10571 \fi
10572 \fi
10573 \edef\Hy@temp{%
10574 \noexpand\pdfmark{%
10575 pdfmark=/DOCVIEW,%
10576 PageMode=/\@pdfpagemode
10577 \Hy@temp
10578 }%
10579 }%
10580 \Hy@temp
10581 \ifx\@pdfpagescrop\@empty
10582 \else
10583 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10584 \fi
10585 \edef\Hy@temp{%
10586 \ifHy@pdftoolbar\else /HideToolbar true\fi
10587 \ifHy@pdfmenubar\else /HideMenubar true\fi
10588 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10589 \ifHy@pdffitwindow /FitWindow true\fi
10590 \ifHy@pdfcenterwindow /CenterWindow true\fi
10591 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10592 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10593 \Hy@UseNameKey{Direction}\@pdfdirection
10594 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10595 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10596 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10597 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10598 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10599 \Hy@UseNameKey{Duplex}\@pdfduplex
10600 \ifx\@pdfpicktraybypdfsize\@empty
10601 \else
10602 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10603 \fi
10604 \ifx\@pdfprintpagerange\@empty

```

```

10605 \else
10606 /PrintPageRange[\@pdfprintpagerange]%
10607 \fi
10608 \ifx\@pdfnumcopies\@empty
10609 \else
10610 /NumCopies \@pdfnumcopies
10611 \fi
10612 }%
10613 \pdfmark{pdfmark=/PUT,%
10614 Raw={%
10615 \string{Catalog\string}<<%
10616 \ifx\Hy@temp\@empty
10617 \else
10618 /ViewerPreferences<<\Hy@temp>>%
10619 \fi
10620 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10621 \ifx\@pdflang\relax
10622 \else
10623 /Lang(\@pdflang)%
10624 \fi
10625 >>%
10626 }%
10627 }%
10628 }
10629 </dviwindo>
10630 <*dvipdfm|xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10631 \providecommand*{\XR@ext}{pdf}
10632 \Hy@setbreaklinks{true}
10633 \def\HyPat@ObjRef{%
10634 @[\^ ]+}%
10635 }
10636 \newsavebox{\pdfm@box}
10637 \def\@pdfm@mark#1{\special{pdf:#1}}
10638 \Hy@WrapperDef\@pdfm@dest#1{%
10639 \Hy@SaveLastskip
10640 \Hy@VerboseAnchor{#1}%
10641 \begingroup
10642 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10643 \def\x{XYZ}%
10644 \ifx\x\@pdfview
10645 \def\x{XYZ @xpos @ypos null}%
10646 \else
10647 \def\x{FitH}%
10648 \ifx\x\@pdfview
10649 \def\x{FitH @ypos}%
10650 \else
10651 \def\x{FitBH}%
10652 \ifx\x\@pdfview
10653 \def\x{FitBH @ypos}%
10654 \else
10655 \def\x{FitV}%
10656 \ifx\x\@pdfview
10657 \def\x{FitV @xpos}%

```

```

10658     \else
10659         \def\x{FitBV}%
10660         \ifx\x\@pdfview
10661             \def\x{FitBV @xpos}%
10662         \else
10663             \def\x{Fit}%
10664             \ifx\x\@pdfview
10665                 \let\x\@pdfview
10666             \else
10667                 \def\x{FitB}%
10668                 \ifx\x\@pdfview
10669                     \let\x\@pdfview
10670             \else
10671                 \def\x{FitR}%
10672                 \ifx\x\@pdfview
10673                     \Hy@Warning{\pdfview=FitR' is not supported}%
10674                     \def\x{XYZ @xpos @ypos null}%
10675                 \else
10676                     \@onelevel@sanitize\@pdfview
10677                     \Hy@Warning{%
10678                         Unknown value '\@pdfview' for pdfview%
10679                     }%
10680                     \def\x{XYZ @xpos @ypos null}%
10681                 \fi
10682             \fi
10683         \fi
10684     \fi
10685 \fi
10686 \fi
10687 \fi
10688 \fi
10689 \pdfmark{dest (\Hy@pstringDest) [thispage /\x]}%
10690 \endgroup
10691 \Hy@RestoreLastskip
10692 }
10693 \providecommand*\@pdfview{XYZ}
10694 \providecommand*\@pdfborder{0 0 1}
10695 \providecommand*\@pdfborderstyle{}
10696 \def\hyper@anchor#1{%
10697     \pdfmark{dest{#1}}%
10698 }
10699 \def\hyper@anchorstart#1{%
10700     \Hy@activeanchortrue
10701     \pdfmark{dest{#1}}%
10702 }
10703 \def\hyper@anchorend{%
10704     \Hy@activeanchorfalse
10705 }
10706 \newcounter{Hy@AnnotLevel}
10707 \ifHy@ocgcolorlinks
10708     \def\OBJ@OCG@view{@OCG@view}%
10709     \pdfmark{%
10710         obj \OBJ@OCG@view <<%
10711         /Type/OCG%
10712         /Name(View)%
10713         /Usage<<%
10714         /Print<<%

```

```

10715         /PrintState/OFF%
10716     >>%
10717     /View<<%
10718         /ViewState/ON%
10719     >>%
10720 >>%
10721 >>%
10722 }%
10723 \@pdfm@mark{close \OBJ@OCG@view}%
10724 \def\OBJ@OCG@print{@OCG@print}%
10725 \@pdfm@mark{%
10726     obj \OBJ@OCG@print <<%
10727         /Type/OCG%
10728         /Name(Print)%
10729         /Usage<<%
10730         /Print<<%
10731         /PrintState/ON%
10732     >>%
10733     /View<<%
10734         /ViewState/OFF%
10735     >>%
10736 >>%
10737 >>%
10738 }%
10739 \@pdfm@mark{close \OBJ@OCG@print}%
10740 \def\OBJ@OCGs{@OCGs}%
10741 \@pdfm@mark{%
10742     obj \OBJ@OCGs [%
10743         \OBJ@OCG@view\space\OBJ@OCG@print
10744     ]%
10745 }%
10746 \@pdfm@mark{close \OBJ@OCGs}%
10747 \@pdfm@mark{%
10748     put @catalog <<%
10749         /OCProperties<<%
10750         /OCGs \OBJ@OCGs
10751         /D<<%
10752         /OFF[\OBJ@OCG@print]%
10753         /AS[%
10754             <<%
10755                 /Event/View%
10756                 /OCGs \OBJ@OCGs
10757                 /Category[/View]%
10758             >>%
10759             <<%
10760                 /Event/Print%
10761                 /OCGs \OBJ@OCGs
10762                 /Category[/Print]%
10763             >>%
10764             <<%
10765                 /Event/Export%
10766                 /OCGs \OBJ@OCGs
10767                 /Category[/Print]%
10768             >>%
10769         ]%
10770     >>%
10771 >>%

```

```

10772 >>%
10773 }%
10774 \AtBeginShipout{%
10775   \setbox\AtBeginShipoutBox=\hbox{%
10776     \copy\AtBeginShipoutBox
10777     \@pdfm@mark{%
10778       put @resources <<%
10779       /Properties<<%
10780       /OCView \OBJ@OCG@view
10781       /OCPrint \OBJ@OCG@print
10782       >>%
10783       >>%
10784     }%
10785   }%
10786 }%
10787 \Hy@AtBeginDocument{%
10788   \def\Hy@colorlink#1{%
10789     \begingroup
10790     \ifHy@ocgcolorlinks
10791       \def\Hy@ocgcolor{#1}%
10792       \setbox0=\hbox\bgroup\color@begingroup
10793     \else
10794       \HyColor@UseColor#1%
10795     \fi
10796   }%
10797   \def\Hy@endcolorlink{%
10798     \ifHy@ocgcolorlinks
10799       \color@endgroup\egroup
10800     \mbox{%
10801       \@pdfm@mark{content /OC/OCPrint BDC}%
10802       \rlap{\copy0}%
10803       \@pdfm@mark{content EMC/OC/OCView BDC}%
10804       \begingroup
10805         \expandafter\HyColor@UseColor\Hy@ocgcolor
10806         \box0 %
10807       \endgroup
10808       \@pdfm@mark{content EMC}%
10809     }%
10810   \fi
10811   \endgroup
10812 }%
10813 }%
10814 \else
10815   \Hy@DisableOption{ocgcolorlinks}%
10816 \fi

```

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

```

10817 \def\Hy@BeginAnnot#1{%
10818   \global\advance\c@Hy@AnnotLevel\@ne
10819   \ifnum\c@Hy@AnnotLevel=\@ne
10820     #1%
10821   \fi
10822 }
10823 \def\Hy@endAnnot{%
10824   \ifnum\value{Hy@AnnotLevel}=\@ne
10825     \Hy@endcolorlink
10826     \@pdfm@mark{eann}%

```

```

10827 \fi
10828 \global\advance\c@Hy@AnnotLevel\m@ne
10829 }

10830 \def\Hy@undefinedname{UNDEFINED}
10831 \def\hyper@linkstart#1#2{%
10832   \Hy@VerboseLinkStart{#1}{#2}%
10833   \leavevmode
10834   \Hy@BeginAnnot{%
10835     \protected@edef\Hy@testname{#2}%
10836     \ifx\Hy@testname\@empty
10837       \Hy@Warning{%
10838         Empty destination name,\MessageBreak
10839         using ``\Hy@undefinedname'%
10840       }%
10841       \let\Hy@testname\Hy@undefinedname
10842     \else
10843       \Hy@pstringdef\Hy@testname{%
10844         \expandafter\HyperDestNameFilter\expandafter{%
10845           \Hy@testname
10846         }%
10847       }%
10848     \fi
10849     \@pdfm@mark{%
10850       bann<<%
10851       /Type/Annot%
10852       /Subtype/Link%
10853       \ifHy@pdfa /F 4\fi
10854       \Hy@setpdfborder
10855       \Hy@setpdfhighlight
10856       \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10857       \else
10858         /C[\csname @#1bordercolor\endcsname]%
10859       \fi
10860       /A<<%
10861       /S/GoTo%
10862       /D(\Hy@testname)%
10863       \Hy@href@nextactionraw
10864       >>%
10865     >>%
10866   }%
10867   \expandafter\Hy@colorlink\csname @#1color\endcsname
10868 }%
10869 }

10870 \def\hyper@linkend{\Hy@EndAnnot}%
10871 \def\hyper@link#1#2#3{%
10872   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10873 }

10874 \def\hyper@linkfile#1#2#3{%
10875   \leavevmode
10876   \Hy@BeginAnnot{%
10877     \def\Hy@pstringF{#2}%
10878     \Hy@CleanupFile\Hy@pstringF
10879     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10880     \Hy@pstringdef\Hy@pstringD{#3}%
10881     \Hy@MakeRemoteAction
10882     \@pdfm@mark{%
10883       bann<<%

```

```

10884 /Type/Annot%
10885 /Subtype/Link%
10886 \ifHy@pdfa /F 4\fi
10887 \Hy@setpdfborder
10888 \Hy@setpdfhighlight
10889 \ifx\@filebordercolor\relax
10890 \else
10891 /C[\@filebordercolor]%
10892 \fi
10893 /A<<%
10894 /S/GoToR%
10895 /F(\Hy@pstringF)%
10896 /D%
10897 \ifx\#3\%
10898 [\Hy@href@page\@pdfremotestartview]%
10899 \else
10900 (\Hy@pstringD)%
10901 \fi
10902 \Hy@SetNewWindow
10903 \Hy@href@nextactionraw
10904 >>%
10905 >>%
10906 }%
10907 \Hy@colorlink\@filecolor
10908 }%
10909 #1\Hy@xspace@end
10910 \Hy@endAnnot
10911 }
10912 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10913 \leavevmode
10914 \Hy@BeginAnnot{%
10915 \Hy@pstringdef\Hy@pstringF{#1}%
10916 \Hy@pstringdef\Hy@pstringP{#3}%
10917 \@pdfm@mark{%
10918 bann<<%
10919 /Type/Annot%
10920 /Subtype/Link%
10921 \ifHy@pdfa /F 4\fi
10922 \Hy@setpdfborder
10923 \Hy@setpdfhighlight
10924 \ifx\@runbordercolor\relax
10925 \else
10926 /C[\@runbordercolor]%
10927 \fi
10928 /A<<%
10929 /F(\Hy@pstringF)%
10930 /S/Launch%
10931 \Hy@SetNewWindow
10932 \ifx\#3\%
10933 \else
10934 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10935 \fi
10936 \Hy@href@nextactionraw
10937 >>%
10938 >>%
10939 }%
10940 \Hy@colorlink\@runcolor

```



```

10941 }%
10942 #2\Hy@xspace@end
10943 \Hy@EndAnnot
10944 }
10945 \def\hyper@linkurl#1#2{%
10946 \leavevmode
10947 \Hy@BeginAnnot{%
10948 \Hy@pstringdef\Hy@pstringURI{#2}%
10949 \@pdfm@mark{%
10950 bann<<%
10951 /Type/Annot%
10952 /Subtype/Link%
10953 \ifHy@pdfa /F 4\fi
10954 \Hy@setpdfborder
10955 \Hy@setpdfhighlight
10956 \ifx\@urlbordercolor\relax
10957 \else
10958 /C[\@urlbordercolor]%
10959 \fi
10960 /A<<%
10961 /S/URI%
10962 /URI(\Hy@pstringURI)%
10963 \ifHy@href@ismap
10964 /IsMap true%
10965 \fi
10966 \Hy@href@nextactionraw
10967 >>%
10968 >>%
10969 }%
10970 \Hy@colorlink\@urlcolor
10971 }%
10972 #1\Hy@xspace@end
10973 \Hy@EndAnnot
10974 }
10975 \def\Acrobatmenu#1#2{%
10976 \Hy@Acrobatmenu{#1}{#2}{%
10977 \Hy@BeginAnnot{%
10978 \EdefEscapeName\Hy@temp@menu{#1}%
10979 \@pdfm@mark{%
10980 bann<<%
10981 /Type/Annot%
10982 /Subtype/Link%
10983 \ifHy@pdfa /F 4\fi
10984 \Hy@setpdfborder
10985 \Hy@setpdfhighlight
10986 \ifx\@menubordercolor\relax
10987 \else
10988 /C[\@menubordercolor]%
10989 \fi
10990 /A<<%
10991 /S/Named%
10992 /N/\Hy@temp@menu
10993 \Hy@href@nextactionraw
10994 >>%
10995 >>%
10996 }%
10997 \Hy@colorlink\@menucolor

```

```

10998 }%
10999 #2\Hy@xspace@end
11000 \Hy@EndAnnot
11001 }%
11002 }
11003
11004 \def\PDF@FinishDoc{%
11005 \Hy@UseMaketitleInfos
11006 \HyInfo@GenerateAddons
11007 \@pdfm@mark{%
11008 docinfo<<%
11009 /Title(\@pdftitle)%
11010 /Subject(\@pdfsubject)%
11011 /Creator(\@pdfcreator)%
11012 \ifx\@pdfcreationdate\@empty
11013 \else
11014 /CreationDate(\@pdfcreationdate)%
11015 \fi
11016 \ifx\@pdfmoddate\@empty
11017 \else
11018 /ModDate(\@pdfmoddate)%
11019 \fi
11020 /Author(\@pdfauthor)%
11021 \ifx\@pdfproducer\relax
11022 \else
11023 /Producer(\@pdfproducer)%
11024 \fi
11025 /Keywords(\@pdfkeywords)%
11026 \ifx\@pdftrapped\@empty
11027 \else
11028 /Trapped/\@pdftrapped
11029 \fi
11030 \HyInfo@Addons
11031 >>%
11032 }%
11033 \Hy@DisableOption{pdfauthor}%
11034 \Hy@DisableOption{pdftitle}%
11035 \Hy@DisableOption{pdfsubject}%
11036 \Hy@DisableOption{pdfcreator}%
11037 \Hy@DisableOption{addtopdfcreator}%
11038 \Hy@DisableOption{pdfcreationdate}%
11039 \Hy@DisableOption{pdfcreationdate}%
11040 \Hy@DisableOption{pdfmoddate}%
11041 \Hy@DisableOption{pdfproducer}%
11042 \Hy@DisableOption{pdfkeywords}%
11043 \Hy@DisableOption{pdftrapped}%
11044 \Hy@DisableOption{pdfinfo}%
11045 }
11046 \def\PDF@SetupDoc{%
11047 \edef\Hy@temp{%
11048 \ifHy@pdftoolbar\else /HideToolbar true\fi
11049 \ifHy@pdfmenubar\else /HideMenubar true\fi
11050 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11051 \ifHy@pdfwindow /FitWindow true\fi
11052 \ifHy@pdfcenterwindow /CenterWindow true\fi
11053 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11054 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode

```

```

11055 \Hy@UseNameKey{Direction}\@pdfdirection
11056 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11057 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11058 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11059 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11060 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11061 \Hy@UseNameKey{Duplex}\@pdfduplex
11062 \ifx\@pdfpicktraybypdfsize\@empty
11063 \else
11064 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11065 \fi
11066 \ifx\@pdfprintpagerange\@empty
11067 \else
11068 /PrintPageRange[\@pdfprintpagerange]%
11069 \fi
11070 \ifx\@pdfnumcopies\@empty
11071 \else
11072 /NumCopies \@pdfnumcopies
11073 \fi
11074 }%
11075 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11076 \@pdfm@mark{%
11077 docview<<%
11078 \ifx\@pdfstartpage\@empty
11079 \else
11080 \ifx\@pdfstartview\@empty
11081 \else
11082 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
11083 \fi
11084 \fi
11085 \ifx\@baseurl\@empty
11086 \else
11087 /URI<</Base(\Hy@pstringB)>>%
11088 \fi
11089 /PageMode/\@pdfpagemode
11090 \ifx\Hy@temp\@empty
11091 \else
11092 /ViewerPreferences<<\Hy@temp>>%
11093 \fi
11094 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11095 \ifx\@pdflang\relax
11096 \else
11097 /Lang(\@pdflang)%
11098 \fi
11099 >>%
11100 }%
11101 \ifx\@pdfpagescrop\@empty
11102 \else
11103 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
11104 \fi
11105 }
11106 </dvipdfm | xetex>
11107 <*dvipdfm | xetex>

```

\hyper@pagetransition

```

11108 \def\hyper@pagetransition{%
11109 \ifx\@pdfpagetransition\relax

```

```

11110 \else
11111 \ifx\@pdfpagetransition\@empty
11112 \else
11113 \special{pdf:put @thispage %
11114 <</Trans<</S/\@pdfpagetransition>>>>%
11115 }%
11116 \fi
11117 \fi
11118 }

```

\hyper@pageduration

```

11119 \def\hyper@pageduration{%
11120 \ifx\@pdfpageduration\relax
11121 \else
11122 \ifx\@pdfpageduration\@empty
11123 \else
11124 \special{pdf:put @thispage %
11125 <</Dur \@pdfpageduration>>>%
11126 }%
11127 \fi
11128 \fi
11129 }

```

\hyper@pagehidden

```

11130 \def\hyper@pagehidden{%
11131 \ifHy@useHidKey
11132 \special{pdf:put @thispage %
11133 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11134 }%
11135 \fi
11136 }

11137 \g@addto@macro\Hy@EveryPageBoxHook{%
11138 \hyper@pagetransition
11139 \hyper@pageduration
11140 \hyper@pagehidden
11141 }

11142 </dvipdfm | xetex>

```

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

```

11143 <(*dvipdfm)
11144 \AtBeginShipoutFirst{%
11145 \ifHy@setpagesize
11146 \begingroup
11147 \@ifundefined{stockwidth}{%
11148 \ifdim\paperwidth>\z@
11149 \ifdim\paperheight>\z@
11150 \special{papersize=\the\paperwidth,\the\paperheight}%
11151 \fi
11152 \fi
11153 }{%
11154 \ifdim\stockwidth>\z@
11155 \ifdim\stockheight>\z@
11156 \special{papersize=\the\stockwidth,\the\stockheight}%
11157 \fi
11158 \fi

```

```

11159 }%
11160 \endgroup
11161 \fi
11162 \Hy@DisableOption{setpagesize}%
11163 }
11164 </dvipdfm>

```

47.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

11165 <*vtexhtml>
11166 \providecommand*{\XR@ext}{htm}
11167 \RequirePackage{vtexhtml}
11168 \newif\if@Localurl
11169 \let\PDF@FinishDoc\ltx@empty
11170 \def\PDF@SetupDoc{%
11171   \ifx\@baseurl\@empty
11172   \else
11173     \special{!direct <base href="\@baseurl">}%
11174   \fi
11175 }
11176 \def\@urltype{url}
11177 \def\hyper@link#1#2#3{%
11178   \Hy@VerboseLinkStart{#1}{#2}%
11179   \leavevmode
11180   \special{!direct <a href=%
11181     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11182   #3\Hy@xspace@end
11183   \special{!direct </a>}%
11184 }
11185 \def\hyper@linkurl#1#2{%
11186   \begingroup
11187     \hyper@chars
11188     \leavevmode
11189     \MathBSuppress=1\relax
11190     \special{!direct <a href=%
11191       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
11192     #1\Hy@xspace@end
11193     \MathBSuppress=0\relax
11194     \special{!direct </a>}%
11195   \endgroup
11196 }
11197 \def\hyper@linkfile#1#2#3{%
11198   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11199 }
11200 \def\hyper@linkstart#1#2{%
11201   \Hy@VerboseLinkStart{#1}{#2}%
11202   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
11203     \@Localurltrue
11204     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
11205   \else
11206     \@Localurlfalse
11207     \begingroup
11208       \hyper@chars
11209       \special{!aref \HyperDestNameFilter{#2}}%
11210     \endgroup

```

```

11211 \fi
11212 }
11213 \def\hyper@linkend{%
11214 \if@Localurl
11215 \special{!endaref}%
11216 \else
11217 \special{!direct </a>}%
11218 \fi
11219 }
11220 \Hy@WrapperDef\hyper@anchorstart#1{%
11221 \Hy@SaveLastskip
11222 \Hy@VerboseAnchor{#1}%
11223 \begingroup
11224 \hyper@chars
11225 \special{!aname #1}%
11226 \special{!direct <a name=%
11227 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11228 \endgroup
11229 \Hy@activeanchortrue
11230 }
11231 \def\hyper@anchorend{%
11232 \special{!direct </a>}%
11233 \Hy@activeanchorfalse
11234 \Hy@RestoreLastskip
11235 }
11236 \Hy@WrapperDef\hyper@anchor#1{%
11237 \Hy@SaveLastskip
11238 \Hy@VerboseAnchor{#1}%
11239 \begingroup
11240 \let\protect=\string
11241 \hyper@chars
11242 \leavevmode
11243 \special{!aname #1}%
11244 \special{!direct <a name=%
11245 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11246 \endgroup
11247 \Hy@activeanchortrue
11248 \bgroup\anchor@spot\egroup
11249 \special{!direct </a>}%
11250 \Hy@activeanchorfalse
11251 \Hy@RestoreLastskip
11252 }
11253 \def\@Form[#1]{%
11254 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11255 }
11256 \let\@endForm\ltx@empty
11257 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11258 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11259 }
11260 \def\@TextField[#1]#2{% parameters, label
11261 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11262 }
11263 \def\@CheckBox[#1]#2{% parameters, label
11264 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11265 }
11266 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11267 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%

```

```

11268 }
11269 \def\@PushButton[#1]#2{% parameters, label
11270 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11271 }
11272 \def\@Reset[#1]#2{%
11273 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11274 }
11275 \def\@Submit[#1]#2{%
11276 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11277 }
11278 </vtexhtml>
11279 <*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.

```

11280 \ifx\mediaheight\@undefined
11281 \else
11282 \ifx\mediaheight\relax
11283 \else
11284 \ifHy@setpagesize
11285 \providecommand*\VTeXInitMediaSize{%
11286 \ltx@ifundefined{stockwidth}{%
11287 \ifdim\paperheight>0pt %
11288 \setlength\mediaheight\paperheight
11289 \fi
11290 \ifdim\paperheight>0pt %
11291 \setlength\mediawidth\paperwidth
11292 \fi
11293 }{%
11294 \ifdim\stockheight>0pt %
11295 \setlength\mediaheight\stockheight
11296 \fi
11297 \ifdim\stockwidth>0pt %
11298 \setlength\mediawidth\stockwidth
11299 \fi
11300 }%
11301 }%
11302 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11303 \fi
11304 \Hy@DisableOption{setpagesize}%
11305 \fi
11306 \fi

```

Older versions of VTeX require `xyz` in lower case.

```

11307 \providecommand*\@pdfview{xyz}
11308 \providecommand*\@pdfborder{0 0 1}
11309 \providecommand*\@pdfborderstyle{}
11310 \let\CurrentBorderColor\@linkbordercolor
11311 \Hy@WrapperDef\hyper@anchor#1{%
11312 \Hy@SaveLastskip
11313 \Hy@VerboseAnchor{#1}%
11314 \begingroup
11315 \let\protect=\string
11316 \hyper@chars
11317 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11318 \endgroup
11319 \Hy@activeanchortrue

```

```

11320 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11321 \Hy@activeanchorfalse
11322 \Hy@RestoreLastskip
11323 }
11324 \Hy@WrapperDef\hyper@anchorstart#1{%
11325 \Hy@SaveLastskip
11326 \Hy@VerboseAnchor{#1}%
11327 \begingroup
11328 \hyper@chars
11329 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11330 \endgroup
11331 \Hy@activeanchortrue
11332 }
11333 \def\hyper@anchorend{%
11334 \Hy@activeanchorfalse
11335 \Hy@RestoreLastskip
11336 }
11337 \def\@urltype{url}
11338 \def\Hy@undefinedname{UNDEFINED}
11339 \def\hyper@linkstart#1#2{%
11340 \Hy@VerboseLinkStart{#1}{#2}%
11341 \Hy@pstringdef\Hy@pstringURI{#2}%
11342 \expandafter\Hy@colorlink\csname @#1color\endcsname
11343 \ltx@ifundefined{@#1bordercolor}{%
11344 \let\CurrentBorderColor\relax
11345 }{%
11346 \edef\CurrentBorderColor{%
11347 \csname @#1bordercolor\endcsname
11348 }%
11349 }%
11350 \def\Hy@tempa{#1}%
11351 \ifx\Hy@tempa\@urltype
11352 \special{!%
11353 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11354 \ifHy@href@ismap
11355 /IsMap true%
11356 \fi
11357 \Hy@href@nextactionraw
11358 >,%
11359 a=<%
11360 \ifHy@pdfa /F 4\fi
11361 \Hy@setpdfborder
11362 \ifx\CurrentBorderColor\relax
11363 \else
11364 /C [\CurrentBorderColor]%
11365 \fi
11366 >%
11367 }%
11368 \else
11369 \protected@edef\Hy@testname{#2}%
11370 \ifx\Hy@testname\@empty
11371 \Hy@Warning{%
11372 Empty destination name,\MessageBreak
11373 using ``\Hy@undefinedname'%
11374 }%
11375 \let\Hy@testname\Hy@undefinedname
11376 \fi

```



```

11377 \special{!%
11378   aref \expandafter\HyperDestNameFilter
11379     \expandafter{\Hy@testname};%
11380   a=<%
11381     \ifHy@pdfa /F 4\fi
11382     \Hy@setpdfborder
11383     \ifx\CurrentBorderColor\relax
11384     \else
11385       /C [\CurrentBorderColor]%
11386     \fi
11387   >%
11388   }%
11389 \fi
11390 }
11391 \def\hyper@linkend{%
11392 \special{!endaref}%
11393 \Hy@endcolorlink
11394 }
11395 \def\hyper@linkfile#1#2#3{%
11396 \leavevmode
11397 \def\Hy@pstringF{#2}%
11398 \Hy@CleanupFile\Hy@pstringF
11399 \special{!%
11400   aref <%
11401     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11402     f=\Hy@pstringF>#3;%
11403   a=<%
11404     \ifHy@pdfa /F 4\fi
11405     \Hy@setpdfborder
11406     \ifx\@filebordercolor\relax
11407     \else
11408       /C [\@filebordercolor]%
11409     \fi
11410   >%
11411   }%
11412   \Hy@colorlink\@filecolor
11413   #1\Hy@xspace@end
11414   \Hy@endcolorlink
11415   \special{!endaref}%
11416 }
11417 \def\hyper@linkurl#1#2{%
11418 \begingroup
11419 \Hy@pstringdef\Hy@pstringURI{#2}%
11420 \hyper@chars
11421 \leavevmode
11422 \special{!%
11423   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11424     \ifHy@href@ismap
11425       /IsMap true%
11426     \fi
11427     \Hy@href@nextactionraw
11428   >;%
11429   a=<%
11430     \ifHy@pdfa /F 4\fi
11431     \Hy@setpdfborder
11432     \ifx\@urlbordercolor\relax
11433     \else

```

```

11434         /C [\@urlbordercolor]%
11435     \fi
11436     >%
11437 }%
11438 \Hy@colorlink\@urlcolor
11439 #1\Hy@xspace@end
11440 \Hy@endcolorlink
11441 \special{!endaref}%
11442 \endgroup
11443 }
11444 \def\hyper@link#1#2#3{%
11445 \Hy@VerboseLinkStart{#1}{#2}%
11446 \ltx@ifundefined{@#1bordercolor}{%
11447 \let\CurrentBorderColor\relax
11448 }{%
11449 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11450 }%
11451 \leavevmode
11452 \protected@edef\Hy@testname{#2}%
11453 \ifx\Hy@testname\@empty
11454 \Hy@Warning{%
11455     Empty destination name,\MessageBreak
11456     using '\Hy@undefinedname'%
11457 }%
11458 \let\Hy@testname\Hy@undefinedname
11459 \fi
11460 \special{!%
11461     aref \expandafter\HyperDestNameFilter
11462     \expandafter{\Hy@testname};%
11463     a=<%
11464     \ifHy@pdfa /F 4\fi
11465     \Hy@setpdfborder
11466     \ifx\CurrentBorderColor\relax
11467     \else
11468     /C [\CurrentBorderColor]%
11469     \fi
11470     >%
11471 }%
11472 \expandafter
11473 \Hy@colorlink\csname @#1color\endcsname
11474 #3\Hy@xspace@end
11475 \Hy@endcolorlink
11476 \special{!endaref}%
11477 }
11478 \def\hyper@image#1#2{%
11479 \hyper@linkurl{#2}{#1}%
11480 }
11481 \def\@hyper@launch run:#1\#2#3{%
11482 \Hy@pstringdef\Hy@pstringF{#1}%
11483 \Hy@pstringdef\Hy@pstringP{#3}%
11484 \leavevmode
11485 \special{!aref %
11486 <u=%
11487 /Type/Action%
11488 /S/Launch%
11489 /F(\Hy@pstringF)%
11490 \Hy@SetNewWindow

```

```

11491 \ifx\#3\%
11492 \else
11493 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11494 \fi
11495 \Hy@href@nextactionraw
11496 >%
11497 a=<%
11498 \ifHy@pdfa /F 4\fi
11499 \Hy@setpdfborder
11500 \ifx\@runbordercolor\relax
11501 \else
11502 /C[\@runbordercolor]%
11503 \fi
11504 >%
11505 }%
11506 \Hy@colorlink\@runcolor
11507 #2\Hy@xspace@end
11508 \Hy@endcolorlink
11509 \special{!endaref}%
11510 }
11511 \def\Acrobatmenu#1#2{%
11512 \EdefEscapeName\Hy@temp@menu{#1}%
11513 \Hy@Acrobatmenu{#1}{#2}{%
11514 \special{!%
11515 aref <u=/S /Named /N /\Hy@temp@menu>;%
11516 a=<%
11517 \ifHy@pdfa /F 4\fi
11518 \Hy@setpdfborder
11519 \ifx\@menubordercolor\relax
11520 \else
11521 /C[\@menubordercolor]%
11522 \fi
11523 >%
11524 }%
11525 \Hy@colorlink\@menucolor
11526 #2\Hy@xspace@end
11527 \Hy@endcolorlink
11528 \special{!endaref}%
11529 }%
11530 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for VTeX 7.02 or later.

Please never use \@ifundefined{VTeXversion}{..}{..} *globally*.

```

11531 \ifnum\Hy@VTeXversion<702 %
11532 \else
11533 \def\hyper@pagetransition{%
11534 \ifx\@pdfpagetransition\relax
11535 \else
11536 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

11537 \else
11538 \hvtex@parse@trans\@pdfpagetransition
11539 \fi
11540 \fi
11541 }%

```

I have to write an “honest” parser to convert raw PDF code into V_TE_X \special.
(AVK)

Syntax of V_TE_X \special{!trans <transition_effect>}:

```
<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
    <Dissolve_effect> | <Glitter_effect> |
    <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>
```

Transition codes:

```
11542 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11543 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11544 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11545 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11546 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11547 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11548 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
11549 \def\hvtex@par@dimension{/Dm}%
11550 \def\hvtex@par@direction{/Di}%
11551 \def\hvtex@par@duration{/D}%
11552 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11553 \def\hvtex@gettoken{%
11554   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11555 }%
```

Notice that tokens in the input buffer must be space delimited.

```
11556 \def\hvtex@gettoken@#1 #2\@nil{%
11557   \edef\hvtex@token{#1}%
11558   \edef\hvtex@buffer{#2}%
11559 }%
11560 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
11561 \let\hvtex@trans@code\@empty
11562 \let\hvtex@param@dimension\@empty
11563 \let\hvtex@param@direction\@empty
11564 \let\hvtex@param@duration\@empty
11565 \let\hvtex@param@motion\@empty
11566 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
11567 \hvtex@gettoken
11568 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
11569 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```

11570     \else
11571     \hvtex@gettoken
11572     \fi
11573 \fi
11574 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11575 \hvtex@trans@params
11576 }%

```

Reentrant macro to parse optional parameters.

```

11577 \def\hvtex@trans@params{%
11578 \ifx\hvtex@buffer\@empty
11579 \else
11580 \hvtex@gettoken
11581 \let\hvtex@trans@par\hvtex@token
11582 \ifx\hvtex@buffer\@empty
11583 \else
11584 \hvtex@gettoken
11585 \ifx\hvtex@trans@par\hvtex@par@duration
/D is the effect duration in seconds. VTEX special takes it in milliseconds.
11586 \let\hvtex@param@duration\hvtex@token
11587 \else \ifx\hvtex@trans@par\hvtex@par@motion
/M can be either /I or /O
11588 \expandafter\edef\expandafter\hvtex@param@motion
11589 \expandafter{\expandafter\@gobble\hvtex@token}%
11590 \else \ifx\hvtex@trans@par\hvtex@par@dimension
/Dm can be either /H or /V
11591 \expandafter\edef\expandafter\hvtex@param@dimension
11592 \expandafter{\expandafter\@gobble\hvtex@token}%
11593 \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).

```

11594 \let\hvtex@param@direction\hvtex@token
11595 \fi\fi\fi\fi
11596 \fi
11597 \fi
11598 \ifx\hvtex@buffer\@empty
11599 \let\next\hvtex@produce@trans
11600 \else
11601 \let\next\hvtex@trans@params
11602 \fi
11603 \next
11604 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

11605 \def\hvtex@produce@trans{%
11606 \let\vtex@trans@special\@empty
11607 \if S\hvtex@trans@code
11608 \edef\vtex@trans@special{\hvtex@trans@code
11609 \hvtex@param@dimension\hvtex@param@motion}%
11610 \else\if B\hvtex@trans@code
11611 \edef\vtex@trans@special{%
11612 \hvtex@trans@code\hvtex@param@dimension

```

```

11613 }%
11614 \else\if X\hvtex@trans@code
11615 \edef\vtex@trans@special{%
11616 \hvtex@trans@code\hvtex@param@motion
11617 }%
11618 \else\if W\hvtex@trans@code
11619 \edef\vtex@trans@special{%
11620 \hvtex@trans@code\hvtex@param@direction
11621 }%
11622 \else\if D\hvtex@trans@code
11623 \let\vtex@trans@special\hvtex@trans@code
11624 \else\if R\hvtex@trans@code
11625 \let\vtex@trans@special\hvtex@trans@code
11626 \else\if G\hvtex@trans@code
11627 \edef\vtex@trans@special{%
11628 \hvtex@trans@code\hvtex@param@direction
11629 }%
11630 \fi\fi\fi\fi\fi\fi
11631 \ifx\vtex@trans@special\@empty
11632 \else
11633 \ifx\hvtex@param@duration\@empty
11634 \else
11635 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11636 \multiply\dimen@\@m
11637 \edef\vtex@trans@special{%
11638 \vtex@trans@special,\strip@pt\dimen@
11639 }%
11640 \fi

```

And all the mess is just for this.

```

11641 \special{!trans \vtex@trans@special}%
11642 \fi
11643 }%
11644 \def\hyper@pageduration{%
11645 \ifx\@pdfpageduration\relax
11646 \else
11647 \ifx\@pdfpageduration\@empty
11648 \special{!duration-}%
11649 \else
11650 \special{!duration \@pdfpageduration}%
11651 \fi
11652 \fi
11653 }%
11654 \def\hyper@pagehidden{%
11655 \ifHy@useHidKey
11656 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11657 \fi
11658 }%
11659 \g@addto@macro\Hy@EveryPageBoxHook{%
11660 \hyper@pagetransition
11661 \hyper@pageduration
11662 \hyper@pagehidden
11663 }%
11664 \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

```

11665 \ifx\@pdfproducer\relax
11666 \def\@pdfproducer{VTeX}%
11667 \ifnum\Hy@VTeXversion>\z@
11668 \count@\VTeXversion
11669 \divide\count@ 100 %
11670 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11671 \multiply\count@ -100 %
11672 \advance\count@\VTeXversion
11673 \edef\@pdfproducer{%
11674 \@pdfproducer
11675 .\ifnum\count@<10 0\fi\the\count@
11676 \ifx\VTeXOS\@undefined\else
11677 \ifnum\VTeXOS>0 %
11678 \ifnum\VTeXOS<6 %
11679 \space(%
11680 \ifcase\VTeXOS
11681 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11682 \fi
11683 )%
11684 \fi
11685 \fi
11686 \fi
11687 ,\space
11688 \ifnum\OpMode=\@one PDF\else PS\fi
11689 \space backend%
11690 \ifx\gexmode\@undefined\else
11691 \ifnum\gexmode>\z@\space with GeX\fi
11692 \fi
11693 }%
11694 \fi
11695 \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).

```

11696 \def\PDF@SetupDoc{%

```

```

11697 \ifx\@pdfpagescrop\@empty
11698 \else
11699 \special{!pdfinfo b=<\@pdfpagescrop>}%
11700 \fi
11701 \ifx\@pdfstartpage\@empty
11702 \else
11703 \ifx\@pdfstartview\@empty
11704 \else
11705 \special{!onopen Page\@pdfstartpage}%
11706 \fi
11707 \fi
11708 \special{!pdfinfo p=<\/\@pdfpagemode>}%
11709 \ifx\@baseurl\@empty
11710 \else
11711 \special{!pdfinfo u=<<<\/Base (\@baseurl)>>>}%
11712 \fi
11713 \special{!pdfinfo v=<<<%
11714 \ifHy@pdftoolbar\else /HideToolbar true\fi
11715 \ifHy@pdfmenubar\else /HideMenubar true\fi
11716 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11717 \ifHy@pdfwindow /FitWindow true\fi
11718 \ifHy@pdfcenterwindow /CenterWindow true\fi
11719 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11720 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11721 \Hy@UseNameKey{Direction}\@pdfdirection
11722 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11723 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11724 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11725 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11726 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11727 \Hy@UseNameKey{Duplex}\@pdfduplex
11728 \ifx\@pdfpicktraybypdfsize\@empty
11729 \else
11730 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11731 \fi
11732 \ifx\@pdfprintpagerange\@empty
11733 \else
11734 /PrintPageRange[\@pdfprintpagerange]%
11735 \fi
11736 \ifx\@pdfnumcopies\@empty
11737 \else
11738 /NumCopies \@pdfnumcopies
11739 \fi
11740 >>>}%
11741 \ifx\@pdfpagelayout\@empty
11742 \else
11743 \special{!pdfinfo l=<\/\@pdfpagelayout\space>}%
11744 \fi
11745 }%
11746 \HyInfo@AddonUnsupportedtrue
11747 \define@key{Hyp}{pdfcreationdate}{%
11748 \Hy@Warning{%
11749 VTeX does not support pdfcreationdate.\MessageBreak
11750 Therefore its setting is ignored%
11751 }%
11752 }
11753 \define@key{Hyp}{pdfmoddate}{%

```



```

11754 \Hy@Warning{%
11755   VTeX does not support pdfmoddate.\MessageBreak
11756   Therefore its setting is ignored%
11757 }%
11758 }
11759 \def\PDF@FinishDoc{%
11760   \Hy@UseMaketitleInfos
11761   \HyInfo@TrappedUnsupported
11762   \special{!pdfinfo a=<\@pdfauthor>}%
11763   \special{!pdfinfo t=<\@pdftitle>}%
11764   \special{!pdfinfo s=<\@pdfsubject>}%
11765   \special{!pdfinfo c=<\@pdfcreator>}%
11766   \ifx\@pdfproducer\relax
11767   \else
11768     \special{!pdfinfo r=<\@pdfproducer>}%
11769   \fi
11770   \special{!pdfinfo k=<\@pdfkeywords>}%
11771   \Hy@DisableOption{pdfauthor}%
11772   \Hy@DisableOption{pdftitle}%
11773   \Hy@DisableOption{pdfsubject}%
11774   \Hy@DisableOption{pdfcreator}%
11775   \Hy@DisableOption{addtopdfcreator}%
11776   \Hy@DisableOption{pdfcreationdate}%
11777   \Hy@DisableOption{pdfcreationdate}%
11778   \Hy@DisableOption{pdfmoddate}%
11779   \Hy@DisableOption{pdfproducer}%
11780   \Hy@DisableOption{pdfkeywords}%
11781   \Hy@DisableOption{pdftrapped}%
11782   \Hy@DisableOption{pdfinfo}%
11783 }
11784 </vtex>

```

47.7 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.

```

11785 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11786 <package>\providecommand*{\Hy@DistillerDestFix}{%
11787 <*pdfmark | dviwindo>
11788 \def\Hy@DistillerDestFix{%
11789   \begingroup
11790   \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11791   \ifnum \@ifundefined{OpMode}{0}{%
11792     \@ifundefined{gexmode}{0}{%
11793       \ifnum\gexmode>0 \OpMode\else 0\fi
11794     }>1 %
11795   \def\x##1{%

```

```

11796     \immediate\special{!=##1}%
11797   }%
11798   \fi
11799   \x{%
11800     /product where{%
11801       pop %
11802       product(Distiller)search{%
11803         pop pop pop %
11804         version(.)search{%
11805           exch pop exch pop%
11806           (3011)eq{%
11807             gsave %
11808             newpath 0 0 moveto closepath clip%
11809             /Courier findfont 10 scalefont setfont %
11810             72 72 moveto(.)show %
11811             grestore%
11812           }if%
11813         }{pop}ifelse%
11814       }{pop}ifelse%
11815     }if%
11816   }%
11817   \endgroup
11818 }
11819 </pdfmark | dviwindo>

```

47.8 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

```

```

11820 <*pdfmark>
11821 \Hy@breaklinks@unsupported
11822 \def\HyPat@ObjRef{%
11823   \{[~{}]+\}%
11824 }
11825 \Hy@WrapperDef\hyper@anchor#1{%
11826   \Hy@SaveLastskip
11827   \Hy@VerboseAnchor{#1}%
11828   \begingroup
11829     \pdfmark[\anchor@spot]{%
11830       pdfmark=/DEST,%
11831       linktype=anchor,%
11832       View=/\@pdfview \@pdfviewparams,%
11833       DestAnchor={#1}%
11834     }%
11835   \endgroup
11836   \Hy@RestoreLastskip

```

```

11837 }
11838 \ltx@ifundefined{hyper@anchorstart}{\endinput}
11839 \Hy@WrapperDef\hyper@anchorstart#1{%
11840   \Hy@SaveLastskip
11841   \Hy@VerboseAnchor{#1}%
11842   \literalps@out{H.S}%
11843   \Hy@AllowHyphens
11844   \xdef\hyper@currentanchor{#1}%
11845   \Hy@activeanchortrue
11846 }
11847 \def\hyper@anchorend{%
11848   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11849   \pdfmark{%
11850     pdfmark=/DEST,%
11851     linktype=anchor,%
11852     View=/\@pdfview \@pdfviewparams,%
11853     DestAnchor=\hyper@currentanchor,%
11854   }%
11855   \Hy@activeanchorfalse
11856   \Hy@RestoreLastskip
11857 }
11858 \def\hyper@linkstart#1#2{%
11859   \Hy@VerboseLinkStart{#1}{#2}%
11860   \ifHy@breaklinks
11861   \else
11862     \leavevmode
11863     \ifmmode
11864       \def\Hy@LinkMath{$}%
11865     \else
11866       \let\Hy@LinkMath\ltx@empty
11867     \fi
11868     \Hy@SaveSpaceFactor
11869     \hbox\bgroup
11870     \Hy@RestoreSpaceFactor
11871     \Hy@LinkMath
11872   \fi
11873   \expandafter\Hy@colorlink\csname @#1color\endcsname
11874   \literalps@out{H.S}%
11875   \Hy@AllowHyphens
11876   \xdef\hyper@currentanchor{#2}%
11877   \gdef\hyper@currentlinktype{#1}%
11878 }
11879 \def\hyper@linkend{%
11880   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11881   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11882     \let\Hy@tempcolor\relax
11883   }{%
11884     \edef\Hy@tempcolor{%
11885       \csname @\hyper@currentlinktype bordercolor\endcsname
11886     }%
11887   }%
11888   \pdfmark{%
11889     pdfmark=/ANN,%
11890     linktype=link,%
11891     Subtype=/Link,%
11892     PDFAFlags=4,%
11893     Dest=\hyper@currentanchor,%

```

```

11894   AcroHighlight=\@pdfhighlight,%
11895   Border=\@pdfborder,%
11896   BorderStyle=\@pdfborderstyle,%
11897   Color=\Hy@tempcolor,%
11898   Raw=H.B%
11899 }%
11900 \Hy@endcolorlink
11901 \ifHy@breaklinks
11902 \else
11903   \Hy@LinkMath
11904   \Hy@SaveSpaceFactor
11905   \egroup
11906   \Hy@RestoreSpaceFactor
11907 \fi
11908 }

```

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.

```

11909 \begingroup
11910 \catcode`P=12 %
11911 \catcode`T=12 %
11912 \lowercase{\endgroup
11913 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11914 }
11915 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11916 \def\hyper@pagetransition{%
11917 \ifx\@pdfpagetransition\relax
11918 \else
11919 \ifx\@pdfpagetransition\@empty
11920 % 1. Does an old entry have to be deleted?
11921 % 2. If 1=yes, how to delete?
11922 \else
11923 \pdfmark{%
11924 pdfmark=/PUT,%
11925 Raw={%
11926 \string{ThisPage\string}%
11927 <</Trans << /S /\@pdfpagetransition\space >> >>%
11928 }%
11929 }%
11930 \fi
11931 \fi
11932 }

```

`\hyper@pageduration`

```

11933 \def\hyper@pageduration{%
11934 \ifx\@pdfpageduration\relax
11935 \else
11936 \ifx\@pdfpageduration\@empty
11937 % 1. Does an old entry have to be deleted?
11938 % 2. If 1=yes, how to delete?
11939 \else
11940 \pdfmark{%
11941 pdfmark=/PUT,%
11942 Raw={%

```

```

11943         \string{ThisPage\string}%
11944         <</Dur \@pdfpageduration>>%
11945     }%
11946 }%
11947 \fi
11948 \fi
11949 }

```

\hyper@pagehidden

```

11950 \def\hyper@pagehidden{%
11951     \ifHy@useHidKey
11952     \pdfmark{%
11953         pdfmark=/PUT,%
11954         Raw={%
11955             \string{ThisPage\string}%
11956             <</Hid \@pdfpagehidden true\else false\fi>>%
11957         }%
11958     }%
11959 \fi
11960 }

11961 \g@addto@macro\Hy@EveryPageBoxHook{%
11962     \hyper@pagetransition
11963     \hyper@pageduration
11964     \hyper@pagehidden
11965 }

11966 \def\hyper@image#1#2{%
11967     \hyper@linkurl{#2}{#1}%
11968 }

11969 \def\Hy@undefinedname{UNDEFINED}
11970 \def\hyper@link#1#2#3{%
11971     \Hy@VerboseLinkStart{#1}{#2}%
11972     \ltx@ifundefined{#1bordercolor}{%
11973         \let\Hy@tempcolor\relax
11974     }{%
11975         \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11976     }%
11977     \begingroup
11978     \protected@edef\Hy@testname{#2}%
11979     \ifx\Hy@testname\@empty
11980         \Hy@Warning{%
11981             Empty destination name,\MessageBreak
11982             using ``\Hy@undefinedname'%
11983         }%
11984         \let\Hy@testname\Hy@undefinedname
11985     \fi
11986     \pdfmark[{#3}]{%
11987         Color=\Hy@tempcolor,%
11988         linktype={#1},%
11989         AcroHighlight=\@pdfhighlight,%
11990         Border=\@pdfborder,%
11991         BorderStyle=\@pdfborderstyle,%
11992         pdfmark=/ANN,%
11993         Subtype=/Link,%
11994         PDFAFlags=4,%
11995         Dest=\Hy@testname
11996     }%

```

```

11997 \endgroup
11998 }
11999 \newtoks\pdf@docset
12000 \def\PDF@FinishDoc{%
12001 \Hy@UseMaketitleInfos
12002 \HyInfo@GenerateAddons
12003 \let\Hy@temp\@empty
12004 \ifx\@pdfcreationdate\@empty
12005 \else
12006 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
12007 \fi
12008 \ifx\@pdfmoddate\@empty
12009 \else
12010 \expandafter\def\expandafter\Hy@temp\expandafter{%
12011 \Hy@temp
12012 ModDate=\@pdfmoddate,%
12013 }%
12014 \fi
12015 \ifx\@pdfproducer\relax
12016 \else
12017 \expandafter\def\expandafter\Hy@temp\expandafter{%
12018 \Hy@temp
12019 Producer=\@pdfproducer,%
12020 }%
12021 \fi
12022 \expandafter
12023 \pdfmark\expandafter{%
12024 \Hy@temp
12025 pdfmark=/DOCINFO,%
12026 Title=\@pdftitle,%
12027 Subject=\@pdfsubject,%
12028 Creator=\@pdfcreator,%
12029 Author=\@pdfauthor,%
12030 Keywords=\@pdfkeywords,%
12031 Trapped=\@pdftrapped
12032 }%
12033 \ifx\HyInfo@Addons\@empty
12034 \else
12035 \pdfmark{%
12036 pdfmark=/DOCINFO,%
12037 Raw={\HyInfo@Addons}%
12038 }%
12039 \fi
12040 \Hy@DisableOption{pdfauthor}%
12041 \Hy@DisableOption{pdftitle}%
12042 \Hy@DisableOption{pdfsubject}%
12043 \Hy@DisableOption{pdfcreator}%
12044 \Hy@DisableOption{addtopdfcreator}%
12045 \Hy@DisableOption{pdfcreationdate}%
12046 \Hy@DisableOption{pdfcreationdate}%
12047 \Hy@DisableOption{pdfmoddate}%
12048 \Hy@DisableOption{pdfproducer}%
12049 \Hy@DisableOption{pdfkeywords}%
12050 \Hy@DisableOption{pdftrapped}%
12051 \Hy@DisableOption{pdfinfo}%
12052 }
12053 \def\PDF@SetupDoc{%

```

```

12054 \def\Hy@temp{}%
12055 \ifx\@pdfstartpage\@empty
12056 \else
12057 \ifx\@pdfstartview\@empty
12058 \else
12059 \edef\Hy@temp{%
12060 ,Page=\@pdfstartpage
12061 ,View=\@pdfstartview
12062 }%
12063 \fi
12064 \fi
12065 \edef\Hy@temp{%
12066 \noexpand\pdfmark{%
12067 pdfmark=/DOCVIEW,%
12068 PageMode=/\@pdfpagemode
12069 \Hy@temp
12070 }%
12071 }%
12072 \Hy@temp
12073 \ifx\@pdfpagescrop\@empty
12074 \else
12075 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12076 \fi
12077 \edef\Hy@temp{%
12078 \ifHy@pdftoolbar\else /HideToolbar true\fi
12079 \ifHy@pdfmenubar\else /HideMenubar true\fi
12080 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12081 \ifHy@pdfwindow /FitWindow true\fi
12082 \ifHy@pdfcenterwindow /CenterWindow true\fi
12083 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12084 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12085 \Hy@UseNameKey{Direction}\@pdfdirection
12086 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12087 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12088 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12089 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12090 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12091 \Hy@UseNameKey{Duplex}\@pdfduplex
12092 \ifx\@pdfpicktraybypdfsize\@empty
12093 \else
12094 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12095 \fi
12096 \ifx\@pdfprintpagerange\@empty
12097 \else
12098 /PrintPageRange[\@pdfprintpagerange]%
12099 \fi
12100 \ifx\@pdfnumcopies\@empty
12101 \else
12102 /NumCopies \@pdfnumcopies
12103 \fi
12104 }%
12105 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12106 \pdfmark{%
12107 pdfmark=/PUT,%
12108 Raw={%
12109 \string{Catalog\string}<<%
12110 \ifx\Hy@temp\@empty

```

```

12111 \else
12112 /ViewerPreferences<<\Hy@temp>>%
12113 \fi
12114 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12115 \ifx\@pdflang\relax
12116 \else
12117 /Lang(\@pdflang)%
12118 \fi
12119 \ifx\@baseurl\@empty
12120 \else
12121 /URI<</Base(\Hy@pstringB)>>%
12122 \fi
12123 >>%
12124 }%
12125 }%
12126 }
12127 </pdfmark>
12128 <*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.

```

12129 \newif\ifHy@pdfmarkerror
12130 \def\pdfmark{\@ifnextchar[\pdfmark@]{\pdfmark@[]}}
12131 \def\pdfmark@[#1]#2{%
12132 \Hy@pdfmarkerrorfalse
12133 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12134 \@processme
12135 \let\pdf@type\relax
12136 \let\pdf@objdef\ltx@empty
12137 \kvsetkeys{PDF}{#2}%
12138 \ifHy@pdfmarkerror
12139 \else
12140 \ifx\pdf@type\relax
12141 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12142 \ifx\\#1\\%
12143 \else
12144 \pdf@rect{#1}%
12145 \fi
12146 \else
12147 \ifx\\#1\\%
12148 \literalps@out{%
12149 [%
12150 \ifx\pdf@objdef\ltx@empty
12151 \else
12152 /_objdef\string{\pdf@objdef\string}%
12153 \fi
12154 \the\pdf@toks\space\pdf@type\space pdfmark%
12155 }%
12156 \else
12157 \ltx@ifundefined{@\pdf@linktype color}{%
12158 \Hy@colorlink\@linkcolor
12159 }{%
12160 \expandafter\Hy@colorlink

```



```

12161             \csname @\pdf@linktype color\endcsname
12162         }%
12163         \pdf@rect{#1}%
12164         \literalps@out{%
12165             [%
12166             \ifx\pdf@objdef\ltx@empty
12167             \else
12168             /__objdef\string{\pdf@objdef\string}%
12169             \fi
12170             \the\pdf@toks\space\pdf@type\space pdfmark%
12171         }%
12172         \Hy@endcolorlink
12173     \fi
12174 \fi
12175 \fi
12176 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

12177 \newsavebox{\pdf@box}
12178 \providecommand*{\Hy@setouterhbox}{\sbox}
12179 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
12180 \def\Hy@DEST{/DEST}
12181 \def\pdf@rect#1{%
12182     \begingroup
12183     \chardef\x=1 %
12184     \def\Hy@temp{#1}%
12185     \ifx\Hy@temp\ltx@empty
12186     \chardef\x=0 %
12187     \else
12188     \def\y{\anchor@spot}%
12189     \ifx\Hy@temp\y
12190     \def\y{\relax}%
12191     \ifx\anchor@spot\y
12192     \chardef\x=0 %
12193     \fi
12194     \fi
12195     \fi
12196     \expandafter\endgroup
12197     \ifcase\x
12198     \literalps@out{H.S}%
12199     \literalps@out{H.R}%
12200     \else
12201     \leavevmode
12202     \Hy@SaveSpaceFactor
12203     \ifmmode
12204     \def\Hy@LinkMath{$}%

```

```

12205 \else
12206 \let\Hy@LinkMath\ltx@empty
12207 \fi
12208 \ifHy@breaklinks
12209 \Hy@setouterhbox\pdf@box{%
12210 \Hy@RestoreSpaceFactor
12211 \Hy@LinkMath
12212 \Hy@AllowHyphens#1\Hy@xspace@end
12213 \Hy@LinkMath
12214 \Hy@SaveSpaceFactor
12215 }%
12216 \else
12217 \sbox\pdf@box{%
12218 \Hy@RestoreSpaceFactor
12219 \Hy@LinkMath
12220 #1\Hy@xspace@end
12221 \Hy@LinkMath
12222 \Hy@SaveSpaceFactor
12223 }%
12224 \fi
12225 \dimen@ht\pdf@box
12226 \ifdim\dp\pdf@box=\z@
12227 \literalps@out{H.S}%
12228 \else
12229 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12230 \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...).

```

12231 \ifHy@breaklinks
12232 \ifhmode
12233 \Hy@breaklinksunhbox\pdf@box
12234 \else
12235 \box\pdf@box
12236 \fi
12237 \else
12238 \expandafter\box\pdf@box
12239 \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

12240 \ifdim\dimen@=\z@
12241 \literalps@out{H.R}%
12242 \else
12243 \raise\dimen@\hbox{\literalps@out{H.R}}%
12244 \fi
12245 \Hy@RestoreSpaceFactor
12246 \fi
12247 \ifx\pdf@type\Hy@DEST
12248 \else
12249 \pdf@addtoksx{H.B}%
12250 \fi
12251 }

```

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.

```

12252 \newtoks\pdf@toks
12253 \newtoks\pdf@defaulttoks
12254 \pdf@defaulttoks={}
12255 \def\pdf@addtoks#1#2{%
12256   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12257   \@processme
12258 }
12259 \def\pdf@addtoksx#1{%
12260   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12261   \@processme
12262 }
12263 \def\PDFdefaults#1{%
12264   \pdf@defaulttoks={#1}%
12265 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

12266 % what is the type of pdfmark?
12267 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12268 % what is the link type?
12269 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12270 \def\pdf@linktype{link}
12271 % named object?
12272 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12273 \let\pdf@objdef\ltx@empty
12274 % parameter is a stream of PDF
12275 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12276 % parameter is a name
12277 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12278 % parameter is a array
12279 \define@key{PDF}{Border}{%
12280   \edef\Hy@temp{#1}%
12281   \ifx\Hy@temp\@empty
12282     \else
12283       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12284     \fi
12285 }
12286 \let\Hy@BorderArrayPatch\@empty
12287 % parameter is a dictionary
12288 \define@key{PDF}{BorderStyle}{%
12289   \edef\Hy@temp{#1}%
12290   \ifx\Hy@temp\@empty
12291     \else
12292       \pdf@addtoks{<<#1>>}{BS}%
12293     \fi
12294 }
12295 % parameter is a array
12296 \define@key{PDF}{Color}{%
12297   \ifx\relax#1\relax
12298     \else
12299       \pdf@addtoks{[#1]}{Color}% hash-ok
12300     \fi
12301 }
12302 % parameter is a string
12303 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12304 % parameter is a integer
12305 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}

```

```

12306 % parameter is a array
12307 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12308 % parameter is a string
12309 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12310 % parameter is a string or file
12311 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12312 % parameter is a destination
12313 \define@key{PDF}{Dest}{%
12314   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12315   \ifx\Hy@pstringDest\@empty
12316     \Hy@pdfmarkerrortrue
12317     \Hy@Warning{Destination with empty name ignored}%
12318   \else
12319     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12320   \fi
12321 }
12322 \define@key{PDF}{DestAnchor}{%
12323   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12324   \ifx\Hy@pstringDest\@empty
12325     \Hy@pdfmarkerrortrue
12326     \Hy@Warning{Destination with empty name ignored}%
12327   \else
12328     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12329   \fi
12330 }
12331 % parameter is a string
12332 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12333 % parameter is a string
12334 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12335 % parameter is a int
12336 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12337 \define@key{PDF}{PDFAFlags}{%
12338   \ifHy@pdfa
12339     \pdf@addtoks{#1}{F}%
12340   \fi
12341 }
12342 % parameter is a name
12343 \define@key{PDF}{AcroHighlight}{%
12344   \begingroup
12345     \edef\x{#1}%
12346     \expandafter\endgroup\ifx\x\@empty
12347   \else
12348     \pdf@addtoks{#1}{H}%
12349   \fi
12350 }
12351 % parameter is a string
12352 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
12353 % parameter is a string
12354 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
12355 % parameter is a string
12356 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12357 % parameter is a string
12358 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
12359 % parameter is a Boolean
12360 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12361 % parameter is a integer or name
12362 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}

```

```

12363 % parameter is a name
12364 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12365 % parameter is a string
12366 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
12367 % parameter is a array
12368 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
12369 % parameter is a integer
12370 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12371 % parameter is a name
12372 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12373 % parameter is a string
12374 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
12375 % parameter is a string
12376 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
12377 % parameter is a string
12378 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
12379 % parameter is an array
12380 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
12381 % parameter is a string
12382 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12383 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
12384 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
12385 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
12386 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12387 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
12388 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
12389 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
12390 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12391 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}
12392 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12393 \define@key{PDF}{Trapped}{%
12394   \edef\Hy@temp{#1}%
12395   \ifx\Hy@temp\@empty
12396   \else
12397     \pdf@addtoks{/#1}{Trapped}%
12398   \fi
12399 }
12400
12401 (/pdfmarkbase)
12402 (*pdfmark)
12403 \def\Acrobatmenu#1#2{%
12404   \EdefEscapeName\Hy@temp@menu{#1}%
12405   \Hy@Acrobatmenu{#1}{#2}{%
12406     \pdfmark[{#2}] {%
12407       linktype=menu,%
12408       pdfmark=/ANN,%
12409       AcroHighlight=\@pdfhighlight,%
12410       Border=\@pdfborder,%
12411       BorderStyle=\@pdfborderstyle,%
12412       Color=\@menubordercolor,%
12413       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12414       Subtype=/Link,%
12415       PDFANFlags=4%
12416     }%
12417   }%
12418 }

```

And now for some useful examples:

```
12419 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
12420 \def\PDFNextPage@[#1]#2{%
12421   \pdfmark[#{#2}]{%
12422     #1,%
12423     Border=\@pdfborder,%
12424     BorderStyle=\@pdfborderstyle,%
12425     Color=.2 .1 .5,%
12426     pdfmark=/ANN,%
12427     Subtype=/Link,%
12428     PDFAFlags=4,%
12429     Page=/Next%
12430   }%
12431 }
12432 \def\PDFPreviousPage{%
12433   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12434 }
12435 \def\PDFPreviousPage@[#1]#2{%
12436   \pdfmark[#{#2}]{%
12437     #1,%
12438     Border=\@pdfborder,%
12439     BorderStyle=\@pdfborderstyle,%
12440     Color=.4 .4 .1,%
12441     pdfmark=/ANN,%
12442     Subtype=/Link,%
12443     PDFAFlags=4,%
12444     Page=/Prev%
12445   }%
12446 }
12447 \def\PDFOpen#1{%
12448   \pdfmark{#1,pdfmark=/DOCVIEW}%
12449 }
```

This will only work if you use Distiller 2.1 or higher.

```
12450 \def\hyper@linkurl#1#2{%
12451   \begingroup
12452     \Hy@pstringdef\Hy@pstringURI{#2}%
12453     \hyper@chars
12454     \leavevmode
12455     \pdfmark[#{#1}]{%
12456       pdfmark=/ANN,%
12457       linktype=url,%
12458       AcroHighlight=\@pdfhighlight,%
12459       Border=\@pdfborder,%
12460       BorderStyle=\@pdfborderstyle,%
12461       Color=\@urlbordercolor,%
12462       Action={<<%
12463         /Subtype/URI%
12464         /URI(\Hy@pstringURI)%
12465         \ifHy@href@ismap
12466           /IsMap true%
12467         \fi
12468       >>},%
12469       Subtype=/Link,%
12470       PDFAFlags=4%
12471     }%
12472   \endgroup
12473 }
```

```

12474 \def\hyper@linkfile#1#2#3{%
12475   \begingroup
12476   \def\Hy@pstringF{#2}%
12477   \Hy@CleanupFile\Hy@pstringF
12478   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12479   \Hy@pstringdef\Hy@pstringD{#3}%
12480   \Hy@MakeRemoteAction
12481   \leavevmode
12482   \pdfmark[{#1}]{%
12483     pdfmark=/ANN,%
12484     Subtype=/Link,%
12485     PDFAFlags=4,%
12486     AcroHighlight=\@pdfhighlight,%
12487     Border=\@pdfborder,%
12488     BorderStyle=\@pdfborderstyle,%
12489     linktype=file,%
12490     Color=\@filebordercolor,%
12491     Action={%
12492       <<%
12493         /S/GoToR%
12494         \Hy@SetNewWindow
12495         /F(\Hy@pstringF)%
12496         /D%
12497         \ifx\#3\%
12498           [\Hy@href@page\@pdfremotestartview]%
12499         \else
12500           (\Hy@pstringD)cvn%
12501         \fi
12502         \Hy@href@nextactionraw
12503       >>%
12504     }%
12505   }%
12506 \endgroup
12507 }
12508 \def\@hyper@launch run:#1\#2#3{%
12509   \begingroup
12510   \Hy@pstringdef\Hy@pstringF{#1}%
12511   \Hy@pstringdef\Hy@pstringP{#3}%
12512   \leavevmode
12513   \pdfmark[{#2}]{%
12514     pdfmark=/ANN,%
12515     Subtype=/Link,%
12516     PDFAFlags=4,%
12517     AcroHighlight=\@pdfhighlight,%
12518     Border=\@pdfborder,%
12519     BorderStyle=\@pdfborderstyle,%
12520     linktype=run,%
12521     Color=\@runbordercolor,%
12522     Action={%
12523       <<%
12524         /S/Launch%
12525         \Hy@SetNewWindow
12526         /F(\Hy@pstringF)%
12527         \ifx\#3\%
12528         \else
12529           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12530         \fi

```

```

12531      \Hy@href@nextactionraw
12532      >>%
12533    }%
12534  }%
12535  \endgroup
12536 }
12537 </pdfmark>

```

Unfortunately, some parts of the `pdfmark` PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

47.9 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.

```

12538 (*dvips)
12539 \providecommand*\XR@ext}{pdf}
12540 \let\Hy@raisedlink\ltx@empty
12541 \def\literals@out#1{\special{ps:SDict begin #1 end}}%
12542 \def\headerps@out#1{\special{! #1}}%
12543 \input{pdfmark.def}%
12544 \ifx\@pdfproducer\relax
12545   \def\@pdfproducer{dvips + Distiller}%
12546 \fi
12547 \providecommand*\@pdfborder{0 0 1}
12548 \providecommand*\@pdfborderstyle{}
12549 \providecommand*\@pdfview{XYZ}
12550 \providecommand*\@pdfviewparams{ H.V}
12551 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12552 \g@addto@macro\Hy@FirstPageHook{%
12553   \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.

```

12554   /DvipsToPDF{72.27 mul Resolution div} def%
12555   /PDFToDvips{72.27 div Resolution mul} def%
12556   /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.

```

12557   product (Ghostscript) search {pop pop pop revision 927 gt}%
12558   {pop false} ifelse%
12559   {%
12560     /BorderArrayPatch{} def%
12561   }%
12562   {%
12563     /BorderArrayPatch{%
12564       [exch{%
12565         dup dup type/integertype eq exch type/realtype eq or%
12566         {BPToDvips}if%
12567       }forall]%
12568     }def%
12569   } 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.

```

12570   /HyperBorder {1 PDFToDvips} def%
12571   /H.V {pdf@hoff pdf@voff null} def%
12572   /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

```

12573   /H.S {%
12574     currentpoint %
12575     HyperBorder add /pdf@lly exch def %
12576     dup DvipsToPDF 72 add /pdf@hoff exch def %
12577     HyperBorder sub /pdf@llx exch def%
12578   } 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

```

12579   /H.L {%
12580     2 sub dup%
12581     /HyperBasePt exch def %
12582     PDFToDvips /HyperBaseDvips exch def %
12583     currentpoint %
12584     HyperBaseDvips sub /pdf@ury exch def%
12585     /pdf@urx exch def%
12586   } def%
12587   /H.A {%
12588     H.L %
12589     % |pdf@voff| = the distance from the top of the page to a point
12590     % |baselineskip| above the current point in PDF coordinates
12591     currentpoint exch pop %
12592     vsize 72 sub exch DvipsToPDF %
12593     HyperBasePt sub % baseline skip
12594     sub /pdf@voff exch def%
12595   } def%
12596   /H.R {%
12597     currentpoint %
12598     HyperBorder sub /pdf@ury exch def %
12599     HyperBorder add /pdf@urx exch def %

```

```

12600 % | /pdf@voff| = the distance from the top of the page to the current point, in
12601 % PDF coordinates
12602     currentpoint exch pop vsize 72 sub %
12603     exch DvipsToPDF sub /pdf@voff exch def%
12604 } def%
12605 }%
12606 }
12607 \AtBeginShipoutFirst{%
12608   \ifHy@setpagesize
12609     \begingroup
12610       \ifundefined{stockwidth}{%
12611         \ifdim\paperwidth>\z@
12612           \ifdim\paperheight>\z@
12613             \special{papersize=\the\paperwidth,\the\paperheight}%
12614           \fi
12615         \fi
12616       }{%
12617         \ifdim\stockwidth>\z@
12618           \ifdim\stockheight>\z@
12619             \special{papersize=\the\stockwidth,\the\stockheight}%
12620           \fi
12621         \fi
12622       }%
12623     \endgroup
12624   \fi
12625   \Hy@DisableOption{setpagesize}%
12626 }
12627 \def\setpdfinkmargin#1{%
12628   \begingroup
12629     \setlength{\dimen@}{#1}%
12630     \literalps@out{%
12631       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12632     }%
12633   \endgroup
12634 }
12635 </dvips>

```

47.10 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.

```

12636 (*vtexpdfmark)
12637 \providecommand*\XR@ext}{pdf}
12638 \let\Hy@raisedlink\ltx@empty
12639 \def\literalps@out#1{\special{pS:#1}}%
12640 \def\headerps@out#1{\immediate\special{pS:#1}}%
12641 \input{pdfmark.def}%
12642 \ifx\@pdfproducer\relax
12643   \ifnum\OpMode=\@ne
12644     \def\@pdfproducer{VTeX}%
12645   \else
12646     \def\@pdfproducer{VTeX + Distiller}%
12647   \fi
12648 \fi

```

```

12649 \providecommand*\@pdfborder{0 0 1}
12650 \providecommand*\@pdfborderstyle{}
12651 \providecommand*\@pdfview{XYZ}
12652 \providecommand*\@pdfviewparams{ H.V}

12653 \g@addto@macro\Hy@FirstPageHook{%
12654   \headerps@out{%
12655     /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.

```

12656   /HyperBorder {1} def%
12657   /H.V {pdf@hoff pdf@voff null} def%
12658   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12659   /H.S {%
12660     currentpoint %
12661     HyperBorder sub%
12662     /pdf@lly exch def %
12663     dup 72 add /pdf@hoff exch def %
12664     HyperBorder sub%
12665     /pdf@llx exch def%
12666   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12667   /H.L {%
12668     2 sub%
12669     /HyperBasePt exch def %
12670     currentpoint %
12671     HyperBasePt add HyperBorder add%
12672     /pdf@ury exch def %
12673     HyperBorder add%
12674     /pdf@urx exch def%
12675   } def%
12676   /H.A {%
12677     H.L %
12678     currentpoint exch pop %
12679     vsize 72 sub exch %
12680     HyperBasePt add add%
12681     /pdf@voff exch def%
12682   } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12683   /H.R {%
12684     currentpoint %
12685     HyperBorder add%
12686     /pdf@ury exch def %
12687     HyperBorder add%
12688     /pdf@urx exch def %
12689     currentpoint exch pop vsize 72 sub add%
12690     /pdf@voff exch def%
12691   } def%
12692 }%
12693 }

```

```

12694 \def\setpdfinkmargin#1{%
12695   \begingroup
12696     \setlength{\dimen@}{#1}%
12697     \literalps@out{%
12698       /HyperBorder{\strip@pt\dimen@}def%
12699     }%
12700   \endgroup
12701 }
12702 </vtxpdfmark>

```

47.11 Textures

```

12703 <*textures>
12704 \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.

```

12705 \begingroup
12706   \obeylines %
12707   \gdef\Hy@ps@CR{\noexpand
12708   }%
12709 \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`.

```

12710 \def\literalps@out#1{%
12711   \special{postscript 0 0 transform}%
12712   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12713 }%
12714 %

```

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.

```

12715 \def\headerps@out#1{%
12716   \special{%
12717     prepostscript TeXdict begin\Hy@ps@CR
12718     #1\Hy@ps@CR
12719     end%
12720   }%
12721 }%
12722 %

```

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.

```

12723 \g@addto@macro\Hy@FirstPageHook{%
12724   \headerps@out{%
12725     /betterpdfmark {%
12726       systemdict begin %
12727         dup /BP eq%
12728         {cleartomark gsave nulldevice []%
12729          {dup /EP eq%
12730           {cleartomark cleartomark grestore}%
12731           {cleartomark}%
12732           ifelse%
12733         }ifelse %
12734       end%
12735     }def\Hy@ps@CR
12736     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12737   }% end of \headerps@out
12738 }% end of \AtBeginShipoutFirst
12739 %
12740 \input{pdfmark.def}%
12741 %
12742 \ifx\@pdfproducer\relax
12743   \def\@pdfproducer{Textures + Distiller}%
12744 \fi
12745 \providecommand*\@pdfborder{0 0 1}
12746 \providecommand*\@pdfborderstyle{}
12747 \providecommand*\@pdfview{XYZ}
12748 \providecommand*\@pdfviewparams{ H.V}
12749 %

```

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 .

```

12750 \Hy@AtBeginDocument{%
12751   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12752     /vsize {\Hy@pageheight} def%
12753     /DvipsToPDF {} def%
12754     /PDFToDvips {} def%
12755     /BPToDvips {} def%
12756     /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12757     /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12758     /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12759     /H.S {%
12760       currentpoint %
12761       HyperBorder add /pdf@lly exch def %
12762       dup DvipsToPDF 72 add /pdf@hoff exch def %
12763       HyperBorder sub /pdf@llx exch def%
12764     } def\Hy@ps@CR
12765     /H.L {%
12766       2 sub %
12767       PDFToDvips /HyperBase exch def %

```

```

12768     currentpoint %
12769     HyperBase sub /pdf@ury exch def%
12770     /pdf@urx exch def%
12771   } def\Hy@ps@CR
12772   /H.A {%
12773     H.L %
12774     currentpoint exch pop %
12775     vsize 72 sub exch DvipsToPDF %
12776     HyperBase sub % baseline skip
12777     sub /pdf@voff exch def%
12778   } def\Hy@ps@CR
12779   /H.R {%
12780     currentpoint %
12781     HyperBorder sub /pdf@ury exch def %
12782     HyperBorder add /pdf@urx exch def %
12783     currentpoint exch pop vsize 72 sub %
12784     exch DvipsToPDF sub /pdf@voff exch def%
12785   } def\Hy@ps@CR
12786 }%
12787 }

12788 \def\setpdfinkmargin#1{%
12789   \begingroup
12790     \setlength{\dimen@}{#1}%
12791     \literalps@out{%
12792       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12793     }%
12794   \endgroup
12795 }

12796 \Hy@AtBeginDocument{%
12797   \ifHy@colorlinks
12798     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12799   \fi
12800 }

```

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.

```

12801 \expandafter\let\expandafter\keepPDF@SetupDoc
12802   \csname PDF@SetupDoc\endcsname
12803 \def\PDF@SetupDoc{%
12804   \ifx\@baseurl\@empty
12805     \else
12806       \special{html:<base href="\@baseurl">}%
12807     \fi
12808   \keepPDF@SetupDoc
12809 }

12810 \Hy@WrapperDef\hyper@anchor#1{%
12811   \Hy@SaveLastskip
12812   \Hy@VerboseAnchor{#1}%
12813   \begingroup
12814     \let\protect=\string
12815     \special{html:<a name=%
12816       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12817   \endgroup
12818   \Hy@activeanchortrue
12819   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12820   \special{html:</a>}%

```

```

12821 \Hy@activeanchorfalse
12822 \Hy@RestoreLastskip
12823 }
12824 \Hy@WrapperDef\hyper@anchorstart#1{%
12825 \Hy@SaveLastskip
12826 \Hy@VerboseAnchor{#1}%
12827 \begingroup
12828 \hyper@chars
12829 \special{html:<a name=%
12830 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12831 \endgroup
12832 \Hy@activeanchortrue
12833 }
12834 \def\hyper@anchorend{%
12835 \special{html:</a>}%
12836 \Hy@activeanchorfalse
12837 \Hy@RestoreLastskip
12838 }
12839 \def\@urltype{url}
12840 \def\hyper@linkstart#1#2{%
12841 \Hy@VerboseLinkStart{#1}{#2}%
12842 \expandafter\Hy@colorlink\csname @#1color\endcsname
12843 \def\Hy@tempa{#1}%
12844 \ifx\Hy@tempa\@urltype
12845 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12846 \else
12847 \begingroup
12848 \hyper@chars
12849 \special{%
12850 html:<a href=%
12851 \hyper@quote#\Hy@linkfileprefix#2\hyper@quote>%
12852 }%
12853 \endgroup
12854 \fi
12855 }
12856 \def\hyper@linkend{%
12857 \special{html:</a>}%
12858 \Hy@endcolorlink
12859 }
12860 \def\hyper@linkfile#1#2#3{%
12861 \hyper@linkurl{#1}{%
12862 \Hy@linkfileprefix#2\ifx\\#3\\ \else\##3\fi
12863 }%
12864 }
12865 \def\hyper@linkurl#1#2{%
12866 \leavevmode
12867 \ifHy@raiselinks
12868 \Hy@SaveSpaceFactor
12869 \Hy@SaveSavedSpaceFactor
12870 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12871 \Hy@RestoreSavedSpaceFactor
12872 \@linkdim\dp\@tempboxa
12873 \lower\@linkdim\hbox{%
12874 \hyper@chars
12875 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12876 }%
12877 \Hy@colorlink\@urlcolor

```

```

12878 \Hy@RestoreSpaceFactor
12879 #1\Hy@xspace@end
12880 \Hy@SaveSpaceFactor
12881 \@linkdim\ht\@tempboxa
12882 \advance\@linkdim by -6.5\p@
12883 \raise\@linkdim\hbox{\special{html:</a>}}%
12884 \Hy@endcolorlink
12885 \Hy@RestoreSpaceFactor
12886 \else
12887 \begingroup
12888 \hyper@chars
12889 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12890 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12891 \special{html:</a>}%
12892 \Hy@endcolorlink
12893 \endgroup
12894 \fi
12895 }

```

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

```

12896 \def\hyper@link#1#2#3{%
12897 \Hy@VerboseLinkStart{#1}{#2}%
12898 \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
12899 }
12900 \def\hyper@image#1#2{%
12901 \begingroup
12902 \hyper@chars
12903 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12904 \endgroup
12905 }
12906 </textures>

```

47.12 dvipsone

```

12907 % \subsection{dvipsone driver}
12908 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12909 % |\special| commands.
12910 <*dvipsone>
12911 \providecommand*\XR@ext}{pdf}
12912 \let\Hy@raisedlink\ltx@empty
12913 \providecommand*\@pdfborder{0 0 1}
12914 \providecommand*\@pdfborderstyle{}
12915 \def\literalps@out#1{\special{ps:#1}}%
12916 \def\headerps@out#1{\special{headertext=#1}}%
12917 \input{pdfmark.def}%
12918 \HyInfo@AddonUnsupportedtrue
12919 \def\PDF@FinishDoc{%
12920 \Hy@UseMaketitleInfos
12921 \HyInfo@TrappedUnsupported
12922 \special{PDF: Keywords \@pdfkeywords}%
12923 \special{PDF: Title \@pdftitle}%
12924 \special{PDF: Creator \@pdfcreator}%
12925 \ifx\@pdfcreationdate\@empty
12926 \else
12927 \special{PDF: CreationDate \@pdfcreationdate}%
12928 \fi
12929 \ifx\@pdfmoddate\@empty
12930 \else

```



```

12931 \special{PDF: ModDate \@pdfmoddate}%
12932 \fi
12933 \special{PDF: Author \@pdfauthor}%
12934 \ifx\@pdfproducer\relax
12935 \else
12936 \special{PDF: Producer \@pdfproducer}%
12937 \fi
12938 \special{PDF: Subject \@pdfsubject}%
12939 \Hy@DisableOption{pdfauthor}%
12940 \Hy@DisableOption{pdftitle}%
12941 \Hy@DisableOption{pdfsubject}%
12942 \Hy@DisableOption{pdfcreator}%
12943 \Hy@DisableOption{addtopdfcreator}%
12944 \Hy@DisableOption{pdfcreationdate}%
12945 \Hy@DisableOption{pdfcreationdate}%
12946 \Hy@DisableOption{pdfmoddate}%
12947 \Hy@DisableOption{pdfproducer}%
12948 \Hy@DisableOption{pdfkeywords}%
12949 \Hy@DisableOption{pdftrapped}%
12950 \Hy@DisableOption{pdfinfo}%
12951 }
12952 \def\PDF@SetupDoc{%
12953 \def\Hy@temp{}%
12954 \ifx\@pdfstartpage\@empty
12955 \else
12956 \ifx\@pdfstartview\@empty
12957 \else
12958 \edef\Hy@temp{%
12959 ,Page=\@pdfstartpage
12960 ,View=\@pdfstartview
12961 }%
12962 \fi
12963 \fi
12964 \edef\Hy@temp{%
12965 \noexpand\pdfmark{%
12966 pdfmark=/DOCVIEW,%
12967 PageMode=/\@pdfpagemode
12968 \Hy@temp
12969 }%
12970 }%
12971 \Hy@temp
12972 \ifx\@pdfpagescrop\@empty
12973 \else
12974 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12975 \fi
12976 \edef\Hy@temp{%
12977 \ifHy@pdftoolbar\else /HideToolbar true\fi
12978 \ifHy@pdfmenubar\else /HideMenubar true\fi
12979 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12980 \ifHy@pdfwindow /FitWindow true\fi
12981 \ifHy@pdfcenterwindow /CenterWindow true\fi
12982 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12983 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12984 \Hy@UseNameKey{Direction}\@pdfdirection
12985 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12986 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12987 \Hy@UseNameKey{PrintArea}\@pdfprintarea

```

```

12988 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12989 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12990 \Hy@UseNameKey{Duplex}\@pdfduplex
12991 \ifx\@pdfpicktraybypdfsize\@empty
12992 \else
12993 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12994 \fi
12995 \ifx\@pdfprintpagerange\@empty
12996 \else
12997 /PrintPageRange[\@pdfprintpagerange]%
12998 \fi
12999 \ifx\@pdfnumcopies\@empty
13000 \else
13001 /NumCopies \@pdfnumcopies
13002 \fi
13003 }%
13004 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
13005 \pdfmark{%
13006 pdfmark=/PUT,%
13007 Raw={%
13008 \string{Catalog\string}<<%
13009 \ifx\Hy@temp\@empty
13010 \else
13011 /ViewerPreferences<<\Hy@temp>>%
13012 \fi
13013 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
13014 \ifx\@pdflang\relax
13015 \else
13016 /Lang(\@pdflang)%
13017 \fi
13018 \ifx\@baseurl\@empty
13019 \else
13020 /URI<</Base(\Hy@pstringB)>>%
13021 \fi
13022 >>%
13023 }%
13024 }%
13025 }
13026 \providecommand*\@pdfview{XYZ}
13027 \providecommand*\@pdfviewparams{ %
13028 gsave revscl currentpoint grestore %
13029 72 add exch pop null exch null%
13030 }
13031 \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 .

```

13032 \g@addto@macro\Hy@FirstPageHook{%
13033 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

13034 /DvipsToPDF { 65781 div } def%
13035 /PDFToDvips { 65781 mul } def%
13036 /BPToDvips{65781 mul}def%
13037 /HyperBorder { 1 PDFToDvips } def%

```

```

13038 /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.
13039 /BorderArrayPatch{%
13040 [exch{%
13041 dup dup type/integertype eq exch type/realtype eq or%
13042 {BPToDvips}if%
13043 }forall]%
13044 }def%
13045 /H.S {%
13046 currentpoint %
13047 HyperBorder add /pdf@lly exch def %
13048 dup DvipsToPDF 72 add /pdf@hoff exch def %
13049 HyperBorder sub /pdf@llx exch def%
13050 } def%
13051 /H.L {%
13052 2 sub %
13053 PDFToDvips /HyperBase exch def %
13054 currentpoint %
13055 HyperBase sub /pdf@ury exch def%
13056 /pdf@urx exch def%
13057 } def%
13058 /H.A {%
13059 H.L %
13060 currentpoint exch pop %
13061 HyperBase sub % baseline skip
13062 DvipsToPDF /pdf@voff exch def%
13063 } def%
13064 /H.R {%
13065 currentpoint %
13066 HyperBorder sub /pdf@ury exch def %
13067 HyperBorder add /pdf@urx exch def %
13068 currentpoint exch pop DvipsToPDF /pdf@voff exch def%
13069 } def%
13070 }%
13071 }
13072 \def\setpdfinkmargin#1{%
13073 \begingroup
13074 \setlength{\dimen@}{#1}%
13075 \literalps@out{%
13076 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13077 }%
13078 \endgroup
13079 }
13080 </dvipsone>

```

47.13 TeX4ht

```

13081 <*tex4ht>
13082 \providecommand*\XR@ext{\html}
13083 \let\Hy@raisedlink\ltx@empty
13084 \@ifpackageloaded{tex4ht}{%
13085 \Hy@InfoNoLine{tex4ht is already loaded}%
13086 }{%
13087 \RequirePackage[hTeX4ht]{tex4ht}%
13088 }

```

```

13089 \hyperlinkfileprefix{}
13090 \let\PDF@FinishDoc\ltx@empty
13091 \def\PDF@SetupDoc{%
13092   \ifx\@baseurl\@empty
13093   \else
13094     \special{t4ht=<base href="\@baseurl">}%
13095   \fi
13096 }
13097 \Hy@WrapperDef\hyper@anchor#1{%
13098   \Hy@SaveLastskip
13099   \Hy@VerboseAnchor{#1}%
13100   \begingroup
13101     \let\protect=\string
13102     \special{t4ht=<a name=%
13103       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13104   \endgroup
13105   \Hy@activeanchortrue
13106   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13107   \special{t4ht=</a>}%
13108   \Hy@activeanchorfalse
13109   \Hy@RestoreLastskip
13110 }
13111 \Hy@WrapperDef\hyper@anchorstart#1{%
13112   \Hy@SaveLastskip
13113   \Hy@VerboseAnchor{#1}%
13114   \begingroup
13115     \hyper@chars\special{t4ht=<a name=%
13116       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13117   \endgroup
13118   \Hy@activeanchortrue
13119 }
13120 \def\hyper@anchorend{%
13121   \special{t4ht=</a>}%
13122   \Hy@activeanchorfalse
13123   \Hy@RestoreLastskip
13124 }
13125 \def\@urltype{url}
13126 \def\hyper@linkstart#1#2{%
13127   \Hy@VerboseLinkStart{#1}{#2}%
13128   \expandafter\Hy@colorlink\csname @#1color\endcsname
13129   \def\Hy@tempa{#1}%
13130   \ifx\Hy@tempa\@urltype
13131     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13132   \else
13133     \begingroup
13134       \hyper@chars
13135       \special{t4ht=<a href=%
13136         \hyper@quote\#HyperDestNameFilter{#2}\hyper@quote>}%
13137     \endgroup
13138   \fi
13139 }
13140 \def\hyper@linkend{%
13141   \special{t4ht=</a>}%
13142   \Hy@endcolorlink
13143 }
13144 \def\hyper@linkfile#1#2#3{%
13145   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%

```

```

13146 }
13147 \def\hyper@linkurl#1#2{%
13148   \leavevmode
13149   \ifHy@raiselinks
13150     \Hy@SaveSpaceFactor
13151     \Hy@SaveSavedSpaceFactor
13152     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13153     \Hy@RestoreSavedSpaceFactor
13154     \@linkdim\dp\@tempboxa
13155     \lower\@linkdim\hbox{%
13156       \begingroup
13157       \hyper@chars
13158       \special{%
13159         t4ht=<a href=\hyper@quote#2\hyper@quote>%
13160       }%
13161       \endgroup
13162     }%
13163     \Hy@colorlink\@urlcolor
13164     \Hy@RestoreSpaceFactor
13165     #1\Hy@xspace@end
13166     \Hy@SaveSpaceFactor
13167     \Hy@endcolorlink
13168     \@linkdim\ht\@tempboxa
13169     \advance\@linkdim by -6.5\p@
13170     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
13171     \Hy@RestoreSpaceFactor
13172   \else
13173     \begingroup
13174     \hyper@chars
13175     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13176     \Hy@colorlink\@urlcolor
13177     #1\Hy@xspace@end
13178     \Hy@endcolorlink
13179     \special{t4ht=</a>}%
13180   \endgroup
13181 \fi
13182 }

```

Poor implementation of \hyper@link without considering #1.

```

13183 \def\hyper@link#1#2#3{%
13184   \Hy@VerboseLinkStart{#1}{#2}%
13185   \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
13186 }
13187 \def\hyper@image#1#2{%
13188   \begingroup
13189   \hyper@chars
13190   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
13191   \endgroup
13192 }
13193 \let\autoref\ref
13194 \ifx \rEFLiNK \UnDef
13195   \def\rEFLiNK #1#2{#2}%
13196 \fi
13197 \let\backref\ltx@gobble

```

Fix for tex4ht.

```

13198 \AtBeginDocument{%
13199   \expandafter
13200   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname

```

```

13201 \expandafter\def\csname Make:Label\endcsname#1#2{%
13202   \ifhmode
13203     \Hy@SaveSpaceFactor
13204   \else
13205     \global\Hy@SavedSpaceFactor=1000 %
13206   \fi
13207   \Hy@OrgMakeLabel{#1}{%
13208     \Hy@RestoreSpaceFactor
13209     #2\Hy@xspace@end%
13210     \Hy@SaveSpaceFactor
13211   }%
13212   \Hy@RestoreSpaceFactor
13213 }%
13214 }
13215 </tex4ht>
13216 <*tex4htcfg>
13217 \IfFileExists{\jobname.cfg}{\endinput}{%
13218 \Preamble{html}
13219   \begin{document}%
13220 \EndPreamble
13221 \def\TeX{\TeX}
13222 \def\OMEGA{\Omega}
13223 \def\LaTeX{\LaTeX}
13224 \def\LaTeXe{\LaTeX2e}
13225 \def\eTeX{e-TeX}
13226 \def\MF{Metafont}
13227 \def\MP{MetaPost}
13228 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13229 <*pdfmark>
13230 \long\def\@Form[#1]{%
13231 \g@addto@macro\Hy@FirstPageHook{%
13232   \headerps@out{%
13233 [%
13234   /_objdef{pdfDocEncoding}%
13235   /type/dict%
13236 /OBJ pdfmark%
13237 [%
13238   {pdfDocEncoding}%
13239   <<%
13240     /Type/Encoding%
13241     /Differences[%
13242       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13243       /tilde %
13244       39/quotesingle %
13245       96/grave %
13246       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13247       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13248       /quotedblbase/quotedblleft/quotedblright/quoteleft%
13249       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
13250       /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13251       164/currency %
13252       166/brokenbar %
13253       168/dieresis/copyright/ordfeminine %

```

13254 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13255 /twosuperior/threesuperior/acute/mu %
13256 183/periodcentered/cedilla/onesuperior/ordmasculine %
13257 188/onequarter/onehalf/threequarters %
13258 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13259 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13260 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13261 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13262 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13263 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13264 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13265 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13266 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
13267 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13268]%
13269 >>%
13270 /PUT pdfmark%
13271 [%
13272 /_objdef{ZaDb}%
13273 /type/dict%
13274 /OBJ pdfmark%
13275 [%
13276 {ZaDb}%
13277 <<%
13278 /Type/Font%
13279 /Subtype/Type1%
13280 /Name/ZaDb%
13281 /BaseFont/ZapfDingbats%
13282 >>%
13283 /PUT pdfmark%
13284 [%
13285 /_objdef{Helv}%
13286 /type/dict%
13287 /OBJ pdfmark%
13288 [%
13289 {Helv}%
13290 <<%
13291 /Type/Font%
13292 /Subtype/Type1%
13293 /Name/Helv%
13294 /BaseFont/Helvetica%
13295 /Encoding{pdfDocEncoding}%
13296 >>%
13297 /PUT pdfmark%
13298 [%
13299 /_objdef{aform}%
13300 /type/dict%
13301 /OBJ pdfmark%
13302 [%
13303 /_objdef{afields}%
13304 /type/array%
13305 /OBJ pdfmark%
13306 [%
13307 /_objdef{corder}%
13308 /type/array%
13309 /OBJ pdfmark%
13310 {%

```

13311 [%
13312   /BBox[0 0 100 100]%
13313   /_objdef{Check}%
13314 /BP pdfmark %
13315 1 0 0 setrgbcolor%
13316 /ZapfDingbats 80 selectfont %
13317 20 20 moveto%
13318 (4)show%
13319 [/EP pdfmark%
13320 [%
13321   /BBox[0 0 100 100]%
13322   /_objdef{Cross}%
13323 /BP pdfmark %
13324 1 0 0 setrgbcolor%
13325 /ZapfDingbats 80 selectfont %
13326 20 20 moveto%
13327 (8)show%
13328 [/EP pdfmark%
13329 [%
13330   /BBox[0 0 250 100]%
13331   /_objdef{Submit}%
13332 /BP pdfmark %
13333 0.6 setgray %
13334 0 0 250 100 rectfill %
13335 1 setgray %
13336 2 2 moveto %
13337 2 98 lineto %
13338 248 98 lineto %
13339 246 96 lineto %
13340 4 96 lineto %
13341 4 4 lineto %
13342 fill %
13343 0.34 setgray %
13344 248 98 moveto %
13345 248 2 lineto %
13346 2 2 lineto %
13347 4 4 lineto %
13348 246 4 lineto %
13349 246 96 lineto %
13350 fill%
13351 /Helvetica 76 selectfont %
13352 0 setgray %
13353 8 22.5 moveto%
13354 (Submit)show%
13355 [/EP pdfmark%
13356 [%
13357   /BBox[0 0 250 100]%
13358   /_objdef{SubmitP}%
13359 /BP pdfmark %
13360 0.6 setgray %
13361 0 0 250 100 rectfill %
13362 0.34 setgray %
13363 2 2 moveto %
13364 2 98 lineto %
13365 248 98 lineto %
13366 246 96 lineto %
13367 4 96 lineto %

```



```

13368 4 4 lineto %
13369 fill %
13370 1 setgray %
13371 248 98 moveto %
13372 248 2 lineto %
13373 2 2 lineto %
13374 4 4 lineto %
13375 246 4 lineto %
13376 246 96 lineto %
13377 fill%
13378 /Helvetica 76 selectfont %
13379 0 setgray %
13380 10 20.5 moveto%
13381 (Submit)show%
13382 [/EP pdfmark%
13383 } ?pdfmark%
13384 [%
13385 {aform}%
13386 <<%
13387 /Fields{afields}%
13388 /DR<<%
13389 /Font<<%
13390 /ZaDb{ZaDb}%
13391 /Helv{Helv}%
13392 >>%
13393 >>%
13394 /DA(/Helv 10 Tf 0 g)%
13395 /CO{corder}%
13396 \ifHy@pdfa
13397 \else
13398 \ifHyField@NeedAppearances
13399 /NeedAppearances true%
13400 \fi
13401 \fi
13402 >>%
13403 /PUT pdfmark%
13404 [%
13405 {Catalog}%
13406 <<%
13407 /AcroForm{aform}%
13408 >>%
13409 /PUT pdfmark%
13410 }}%
13411 \kvsetkeys{Form}{#1}%
13412 }
13413 \let\@endForm\ltx@empty
13414 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13415 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13416 }

13417 \newcount\HyField@AnnotCount
13418 \HyField@AnnotCount=\z@
13419 \def\HyField@AdvanceAnnotCount{%
13420 \global\advance\HyField@AnnotCount\@ne
13421 }
13422 \def\HyField@TheAnnotCount{%
13423 \the\HyField@AnnotCount
13424 }

```

```

13425 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13426 \def\HyField@AddToFields#1{%
13427   \pdfmark{%
13428     pdfmark=/APPEND,%
13429     Raw={%
13430       \string{afields\string}%
13431       \string{#1\HyField@TheAnnotCount\string}%
13432     }%
13433   }%
13434   \ifx\Fld@calculate@code\ltx@empty
13435   \else
13436     \pdfmark{%
13437       pdfmark=/APPEND,%
13438       Raw={%
13439         \string{corder\string}%
13440         \string{#1\HyField@TheAnnotCount\string}%
13441       }%
13442     }%
13443   \fi
13444 }

13445 \def\@TextField[#1]#2{% parameters, label
13446   \def\Fld@name{#2}%
13447   \let\Fld@default\ltx@empty
13448   \let\Fld@value\@empty
13449   \def\Fld@width{\DefaultWidthofText}%
13450   \def\Fld@height{%
13451     \ifFld@multiline
13452       \DefaultHeightofTextMultiline
13453     \else
13454       \DefaultHeightofText
13455     \fi
13456   }%
13457   \begingroup
13458     \expandafter\HyField@SetKeys\expandafter{%
13459       \DefaultOptionsofText,#1%
13460     }%
13461     \HyField@FlagsText
13462     \ifFld@hidden\def\Fld@width{1sp}\fi
13463     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13464     \HyField@AdvanceAnnotCount
13465     \LayoutTextField{#2}{%
13466       \leavevmode
13467       \Hy@escapeform\PDFForm@Text
13468       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
13469         pdfmark=/ANN,%
13470         objdef=text\HyField@TheAnnotCount,%
13471         Raw={\PDFForm@Text}%
13472       }%
13473     }%
13474     \HyField@AddToFields{text}%
13475   \endgroup
13476 }

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 \ifFld@hidden\def\Fld@width{1sp}\fi
13518 \ifx\Fld@value\relax
13519 \let\Fld@value\Fld@default
13520 \fi
13521 \LayoutChoiceField{#2}{%
13522 \ifFld@radio
13523 \HyField@FlagsRadioButton
13524 \@@Radio{#3}%
13525 \else
13526 \begingroup
13527 \HyField@FlagsChoice
13528 \ifdim\Fld@width<\@tempdima
13529 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13530 \edef\Fld@width{\the\@tempdima}%
13531 \fi
13532 \ifFld@combo
13533 \else
13534 \@tempdima=\the\Fld@menulength\Fld@charsize
13535 \advance\@tempdima by \Fld@borderwidth bp %
13536 \advance\@tempdima by \Fld@borderwidth bp %
13537 \edef\Fld@height{\the\@tempdima}%
13538 \fi

```

```

13539      \@@ListBox{#3}%
13540      \endgroup
13541      \fi
13542    }%
13543  \endgroup
13544 }
13545 \def\@@Radio#1{%
13546   \Fld@listcount=0 %
13547   \EdefEscapeName\Fld@default{\Fld@default}%
13548   \@for\@curropt:=#1\do{%
13549     \expandafter\Fld@checkequals\@curropt==\%
13550     \EdefEscapeName\@currValue{\@currValue}%
13551     \Hy@StepCount\Fld@listcount
13552     \@currDisplay\space
13553     \Hy@escapeform\PDFForm@Radio
13554     \ifnum\Fld@listcount=1 %
13555       \HyField@AdvanceAnnotCount
13556       \fi
13557       \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13558         pdfmark=/ANN,%
13559         objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13560         Raw={%
13561           \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13562         }%
13563       } % deliberate space between radio buttons
13564       \ifnum\Fld@listcount=1 %
13565         \HyField@AddToFields{radio}%
13566       \fi
13567     }%
13568   }
13569   \newcount\Fld@listcount
13570   \def\@@ListBox#1{%
13571     \HyField@PDFChoices{#1}%
13572     \Hy@escapeform\PDFForm@List
13573     \HyField@AdvanceAnnotCount
13574     \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13575       pdfmark=/ANN,%
13576       objdef=list\HyField@TheAnnotCount,%
13577       Raw={\PDFForm@List}%
13578     }%
13579     \HyField@AddToFields{list}%
13580   }
13581   \def\@PushButton[#1]#2{% parameters, label
13582     \def\Fld@name{#2}%
13583     \begingroup
13584     \expandafter\HyField@SetKeys\expandafter{%
13585       \DefaultOptionsofPushButton,#1%
13586     }%
13587     \ifHy@pdfa
13588       \Hy@Error{%
13589         PDF/A: Push button with JavaScript is prohibited%
13590       }\@ehc
13591       \LayoutPushButtonField{%
13592         \leavevmode
13593         \MakeButtonField{#2}%
13594       }%
13595     \else

```

```

13596 \HyField@FlagsPushButton
13597 \ifFld@hidden\def\Fld@width{1sp}\fi
13598 \HyField@AdvanceAnnotCount
13599 \LayoutPushButtonField{%
13600 \leavevmode
13601 \Hy@escapeform\PDFForm@Push
13602 \pdfmark[\MakeButtonField{#2}]{%
13603 pdfmark=/ANN,%
13604 objdef=push\HyField@TheAnnotCount,%
13605 Raw={\PDFForm@Push}%
13606 }%
13607 }%
13608 \HyField@AddToFields{push}%
13609 \fi
13610 \endgroup
13611 }
13612 \def\@Submit[#1]#2{%
13613 \def\Fld@width{\DefaultWidthofSubmit}%
13614 \def\Fld@height{\DefaultHeightofSubmit}%
13615 \begingroup
13616 \expandafter\HyField@SetKeys\expandafter{%
13617 \DefaultOptionsofSubmit,#1%
13618 }%
13619 \HyField@FlagsPushButton
13620 \HyField@FlagsSubmit
13621 \ifFld@hidden\def\Fld@width{1sp}\fi
13622 \Hy@escapeform\PDFForm@Submit
13623 \HyField@AdvanceAnnotCount
13624 \pdfmark[\MakeButtonField{#2}]{%
13625 pdfmark=/ANN,%
13626 objdef=submit\HyField@TheAnnotCount,%
13627 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
13628 }%
13629 \HyField@AddToFields{submit}%
13630 \endgroup
13631 }
13632 \def\@Reset[#1]#2{%
13633 \def\Fld@width{\DefaultWidthofReset}%
13634 \def\Fld@height{\DefaultHeightofReset}%
13635 \begingroup
13636 \expandafter\HyField@SetKeys\expandafter{%
13637 \DefaultOptionsofReset,#1%
13638 }%
13639 \leavevmode
13640 \ifHy@pdfa
13641 \Hy@Error{%
13642 PDF/A: Reset action is prohibited%
13643 }\@ehc
13644 \MakeButtonField{#2}%
13645 \else
13646 \HyField@FlagsPushButton
13647 \ifFld@hidden\def\Fld@width{1sp}\fi
13648 \Hy@escapeform\PDFForm@Reset
13649 \HyField@AdvanceAnnotCount
13650 \pdfmark[\MakeButtonField{#2}]{%
13651 pdfmark=/ANN,%
13652 objdef=reset\HyField@TheAnnotCount,%

```

```

13653     Raw={\PDFForm@Reset}%
13654   }%
13655   \HyField@AddToFields{reset}%
13656 \fi
13657 \endgroup
13658 }%
13659 \def\@CheckBox[#1]#2{% parameters, label
13660   \def\Fld@name{#2}%
13661   \def\Fld@default{0}%
13662   \begingroup
13663     \def\Fld@width{\DefaultWidthofCheckBox}%
13664     \def\Fld@height{\DefaultHeightofCheckBox}%
13665     \expandafter\HyField@SetKeys\expandafter{%
13666       \DefaultOptionsofCheckBox,#1%
13667     }%
13668     \HyField@FlagsCheckBox
13669     \ifFld@hidden\def\Fld@width{1sp}\fi
13670     \HyField@AdvanceAnnotCount
13671     \LayoutCheckField{#2}{%
13672       \leavevmode
13673       \Hy@escapeform\PDFForm@Check
13674       \pdfmark{\MakeCheckField{\Fld@width}{\Fld@height}}{%
13675         pdfmark=/ANN,%
13676         objdef=check\HyField@TheAnnotCount,%
13677         Raw={\PDFForm@Check}%
13678       }%
13679     }%
13680     \HyField@AddToFields{check}%
13681   \endgroup
13682 }
13683 \pdfmark>

```

48.2 HyperTeX

```

13684 \*hypertex>
13685 \def\@Form[#1]{%
13686   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13687 }
13688 \let\@endForm\ltx@empty
13689 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13690   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13691 }
13692 \def\@TextField[#1]#2{% parameters, label
13693   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13694 }
13695 \def\@CheckBox[#1]#2{% parameters, label
13696   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13697 }
13698 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13699   \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13700 }
13701 \def\@PushButton[#1]#2{% parameters, label
13702   \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13703 }
13704 \def\@Reset[#1]#2{%
13705   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13706 }
13707 \def\@Submit[#1]#2{%

```

```

13708 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13709 }
13710 </hypertex>

```

48.3 TeX4ht

```

13711 (*tex4ht)
13712 \def\@Form[#1]{%
13713 \kvsetkeys{Form}{#1}%
13714 \HCode{<form action="\Form@action" method="\Form@method">}}%
13715 }
13716 \def\@endForm{\HCode{</form>}}
13717 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13718 \Hy@Message{Sorry, TeX4ht does not support gauges}%
13719 }
13720 \def\@TextField[#1]#2{% parameters, label
13721 \let\Hy@reserved@a\@empty
13722 \def\Fld@name{#2}%
13723 \let\Fld@default\ltx@empty
13724 \bgroup
13725 \Field@toks={ }%
13726 \kvsetkeys{Field}{#1}%
13727 \HCode{<label for="\Fld@name">#2</label>}}%
13728 \ifFld@password
13729 \@@PasswordField
13730 \else
13731 \@@TextField
13732 \fi
13733 \egroup
13734 }
13735 \def\@@PasswordField{%
13736 \HCode{%
13737 <input type="password" %
13738 id="\Fld@name" %
13739 name="\Fld@name" %
13740 \ifFld@hidden type="hidden" \fi
13741 value="\Fld@default" %
13742 \the\Field@toks
13743 >%
13744 }%
13745 }
13746 \def\@@TextField{%
13747 \ifFld@multiline
13748 \HCode{<textarea %
13749 \ifFld@readonly readonly \fi
13750 id="\Fld@name" %
13751 name="\Fld@name" %
13752 \ifFld@hidden type="hidden" \fi
13753 \the\Field@toks>%
13754 }%
13755 \Fld@default
13756 \HCode{</textarea>}}%
13757 \else
13758 \HCode{<input type="text" %
13759 \ifFld@readonly readonly \fi
13760 id="\Fld@name" %
13761 name="\Fld@name" %
13762 \ifFld@hidden type="hidden" \fi

```

```

13763     value="\Fld@default" %
13764     \the\Field@toks>%
13765 }%
13766 \fi
13767 }
13768 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13769 \def\Fld@name{#2}%
13770 \let\Fld@default\ltx@empty
13771 \let\Hy@reserved@a\relax
13772 \begingroup
13773 \expandafter\Fld@findlength#3\\%
13774 \Field@toks={ }%
13775 \kvsetkeys{Field}{#1}%
13776 #2%
13777 \ifFld@radio
13778 \expandafter\@@Radio#3\\%
13779 \else
13780 \expandafter\@@Menu#3\\%
13781 \fi
13782 \endgroup
13783 }
13784 \def\Fld@findlength#1\\{%
13785 \Fld@menulength=0 %
13786 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13787 }
13788 \def\@@Menu#1\\{%
13789 \HCode{<select size="\the\Fld@menulength" %
13790 name="\Fld@name" %
13791 \the\Field@toks>%
13792 }%
13793 \@for\@curropt:=#1\do{%
13794 \expandafter\Fld@checkequals\@curropt==\\%
13795 \HCode{<option %
13796 \ifx\@curropt\Fld@default selected \fi
13797 value="\@currValue">\@currDisplay</option>%
13798 }%
13799 }%
13800 \HCode{</select>}%
13801 }
13802 \def\@@Radio#1\\{%
13803 \@for\@curropt:=#1\do{%
13804 \expandafter\Fld@checkequals\@curropt==\\%
13805 \HCode{<input type="radio" %
13806 \ifx\@curropt\Fld@default checked \fi
13807 name="\Fld@name" %
13808 value="\@currValue" %
13809 \the\Field@toks>%
13810 }%
13811 \@currDisplay
13812 }%
13813 }
13814 \def\@PushButton[#1]#2{% parameters, label
13815 \def\Fld@name{#2}%
13816 \bgroup
13817 \Field@toks={ }%
13818 \kvsetkeys{Field}{#1}%
13819 \HCode{<input type="button" %

```



```

13820     name="\Fld@name" %
13821     value="#2" %
13822     \the\Field@toks>%
13823 }%
13824 \HCode{</button>}%
13825 \egroup
13826 }
13827 \def\@Submit[#1]#2{%
13828 \HCode{<button type="submit">#2</button>}%
13829 }
13830 \def\@Reset[#1]#2{%
13831 \HCode{<button type="reset">#2</button>}%
13832 }
13833 \def\@CheckBox[#1]#2{% parameters, label
13834 \let\Hy@reserved@a\@empty
13835 \def\Fld@name{#2}%
13836 \def\Fld@default{0}%
13837 \bgroup
13838 \Field@toks={ }%
13839 \kvsetkeys{Field}{#1}%
13840 \HCode{<input type="checkbox" %
13841 \ifFld@checked checked \fi
13842 \ifFld@disabled disabled \fi
13843 \ifFld@readonly readonly \fi
13844 name="\Fld@name" %
13845 \ifFld@hidden type="hidden" \fi
13846 value="\Fld@default" %
13847 \the\Field@toks>%
13848 #2%
13849 }%
13850 \egroup
13851 }
13852 </tex4ht>

```

48.4 pdfTeX

```

13853 <(*pdfTeX)
13854 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13855 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13856 }
13857 \def\MakeFieldObject#1#2{\sbox0{#1}%
13858 \immediate\pdfxform0 %
13859 \expandafter\edef\csname #2Object\endcsname{%
13860 \the\pdfastxform\space 0 R%
13861 }%
13862 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13863 }%
13864 \let\HyField@afields\ltx@empty
13865 \let\HyField@cofields\ltx@empty
13866 \begingroup\expandafter\expandafter\expandafter\endgroup
13867 \expandafter\ifx\csname pdfastlink\endcsname\relax
13868 \let\HyField@AddToFields\relax
13869 \PackageInfo{hyperref}{%
13870 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13871 \MessageBreak
13872 Adobe Reader/Acrobat accepts an empty /Field array,%
13873 \MessageBreak
13874 but other PDF viewers might complain%

```

```

13875 }%
13876 \else
13877 \let\HyField@AuxAddToFields\ltx@gobble
13878 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13879 \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.

```

13880 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13881 \begingroup
13882 \Hy@safe@activetrue
13883 \let\ltx@secondoftwo\relax
13884 \ifx\HyField@cofields\ltx@empty
13885 \xdef\HyField@cofields{%
13886 \ltx@secondoftwo{#1}{ #2 0 R}%
13887 }%
13888 \else
13889 \let\ltx@secondoftwo\relax
13890 \def\HyField@AddCoField##1##2##3{%
13891 \ifx##1\ltx@empty
13892 \ltx@secondoftwo{#1}{ #2 0 R}%
13893 \expandafter\ltx@gobble
13894 \else
13895 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13896 \ltx@secondoftwo{#1}{ #2 0 R}%
13897 \ltx@secondoftwo{##2}{##3}%
13898 \expandafter\expandafter\expandafter\ltx@gobble
13899 \else
13900 \ltx@secondoftwo{##2}{##3}%
13901 \fi
13902 \fi
13903 \HyField@AddCoField
13904 }%
13905 \xdef\HyField@cofields{%
13906 \expandafter\HyField@AddCoField
13907 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13908 }%
13909 \fi
13910 \endgroup
13911 }%
13912 \Hy@AtBeginDocument{%
13913 \if@filesw
13914 \immediate\write\@mainaux{%
13915 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13916 }%
13917 \immediate\write\@mainaux{%
13918 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13919 }%
13920 \fi
13921 \let\HyField@AfterAuxOpen\@firstofone
13922 \def\HyField@AuxAddToFields#1{%
13923 \xdef\HyField@afields{%
13924 \ifx\HyField@afields\@empty
13925 \else
13926 \HyField@afields
13927 \space
13928 \fi
13929 #1 0 R%

```

```

13930 }%
13931 }%
13932 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13933 }%
13934 \def\HyField@AddToFields{%
13935 \expandafter\HyField@@AddToFields\expandafter{%
13936 \the\pdfastlink
13937 }%
13938 \ifx\Fld@calculate@code\ltx@empty
13939 \else
13940 \begingroup
13941 \Hy@safe@activestruer
13942 \edef\Hy@temp{%
13943 \endgroup
13944 \if@filesw
13945 \write\@mainaux{%
13946 \string\HyField@AuxAddToCoFields{%
13947 \Fld@calculate@sortkey
13948 }{%
13949 \the\pdfastlink
13950 }%
13951 }%
13952 \fi
13953 }%
13954 \Hy@temp
13955 \fi
13956 }%
13957 \def\HyField@@AddToFields#1{%
13958 \HyField@AfterAuxOpen{%
13959 \if@filesw
13960 \write\@mainaux{%
13961 \string\HyField@AuxAddToFields{#1}%
13962 }%
13963 \fi
13964 }%
13965 }%
13966 \fi
13967 \def\@Form[#1]{%
13968 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13969 \kvsetkeys{Form}{#1}%
13970 \pdf@ifdraftmode{}{%
13971 \Hy@FormObjects
13972 \ifnum\pdfTeXversion>13 %
13973 \pdfrefobj\OBJ@pdfdocencoding
13974 \pdfrefobj\OBJ@ZaDb
13975 \pdfrefobj\OBJ@Helv
13976 \fi
13977 \AtVeryEndDocument{%
13978 \immediate\pdfobj{%
13979 <<%
13980 /Fields[\HyField@afields]%
13981 \ifx\HyField@cofields\ltx@empty
13982 \else
13983 /CO[\romannumeral-`Q\HyField@cofields]%
13984 \fi
13985 /DR<<%
13986 /Font<<%

```

```

13987      /ZaDb \OBJ@ZaDb\space 0 R%
13988      /Helv \OBJ@Helv\space 0 R%
13989      >>%
13990      >>%
13991      /DA(/Helv 10 Tf 0 g)%
13992      \ifHy@pdfa
13993      \else
13994      \ifHyField@NeedAppearances
13995      /NeedAppearances true%
13996      \fi
13997      \fi
13998      >>%
13999      }%
14000      \edef\OBJ@acroform{\the\pdfflastobj}%
14001      \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
14002      }%
14003      }%
14004      \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

14005      \begingroup
14006      \fontfamily{pzd}%
14007      \fontencoding{U}%
14008      \fontseries{m}%
14009      \fontshape{n}%
14010      \selectfont
14011      \char123 %
14012      \endgroup
14013      }{Ding}%
14014      \MakeFieldObject{%
14015      \fbox{\textcolor{yellow}{\textsf{Submit}}}%
14016      }{Submit}%
14017      \MakeFieldObject{%
14018      \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
14019      }{SubmitP}%
14020      }
14021      \let\@endForm\ltx@empty
14022      \let\HyAnn@AbsPageLabel\ltx@empty
14023      \let\Fld@pageobjref\ltx@empty
14024      \ltx@ifUndefined{pdfpageref}{%
14025      }{%
14026      \ltx@ifpackageloaded{zref-abspage}{%
14027      \newcount\HyAnn@Count
14028      \HyAnn@Count=\ltx@zero
14029      \def\HyAnn@AbsPageLabel{%
14030      \global\advance\HyAnn@Count by\ltx@one
14031      \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
14032      \zref@refused{HyAnn@\the\HyAnn@Count}%
14033      }%
14034      \def\Fld@pageobjref{%
14035      \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
14036      }{%
14037      \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
14038      /P \pdfpageref
14039      \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
14040      \space 0 R%
14041      }{%
14042      }%

```

```

14043 }%
14044 }%
14045 }{%
14046 }%
14047 }

14048 \def\@TextField[#1]#2{% parameters, label
14049 \def\Fld@name{#2}%
14050 \let\Fld@default\ltx@empty
14051 \let\Fld@value\@empty
14052 \def\Fld@width{\DefaultWidthofText}%
14053 \def\Fld@height{%
14054 \ifFld@multiline
14055 \DefaultHeightofTextMultiline
14056 \else
14057 \DefaultHeightofText
14058 \fi
14059 }%
14060 \begingroup
14061 \expandafter\HyField@SetKeys\expandafter{%
14062 \DefaultOptionsofText,#1%
14063 }%
14064 \PDFForm@Name
14065 \HyField@FlagsText
14066 \ifFld@hidden\def\Fld@width{1sp}\fi
14067 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14068 \LayoutTextField{#2}{%
14069 \leavevmode
14070 \HyAnn@AbsPageLabel
14071 \Hy@escapeform\PDFForm@Text
14072 \pdfstartlink user {\PDFForm@Text}\relax
14073 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14074 \HyField@AddToFields
14075 }%
14076 \endgroup
14077 }

14078 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14079 \def\Fld@name{#2}%
14080 \let\Fld@default\relax
14081 \let\Fld@value\relax
14082 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14083 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14084 \begingroup
14085 \Fld@menulength=0 %
14086 \@tempdima\z@
14087 \@for\@curropt:=#3\do{%
14088 \expandafter\Fld@checkequals\@curropt==\%
14089 \Hy@StepCount\Fld@menulength
14090 \settowidth{\@tempdimb}{\@currDisplay}%
14091 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14092 }%
14093 \advance\@tempdima by 15\p@
14094 \begingroup
14095 \HyField@SetKeys{#1}%
14096 \edef\x{\endgroup
14097 \noexpand\expandafter
14098 \noexpand\HyField@SetKeys
14099 \noexpand\expandafter{%

```

```

14100 \expandafter\noexpand\csname DefaultOptionsof%
14101 \ifFld@radio
14102 Radio%
14103 \else
14104 \ifFld@combo
14105 \ifFld@popdown
14106 PopdownBox%
14107 \else
14108 ComboBox%
14109 \fi
14110 \else
14111 ListBox%
14112 \fi
14113 \fi
14114 \endcsname
14115 }%
14116 }\x
14117 \HyField@SetKeys{#1}%
14118 \PDFForm@Name
14119 \ifFld@hidden\def\Fld@width{1sp}\fi
14120 \ifx\Fld@value\relax
14121 \let\Fld@value\Fld@default
14122 \fi
14123 \LayoutChoiceField{#2}{%
14124 \ifFld@radio
14125 \HyField@FlagsRadioButton
14126 \@@Radio{#3}%
14127 \else
14128 \begingroup
14129 \HyField@FlagsChoice
14130 \ifdim\Fld@width<\@tempdima
14131 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14132 \edef\Fld@width{\the\@tempdima}%
14133 \fi
14134 \ifFld@combo
14135 \else
14136 \@tempdima=\the\Fld@menulength\Fld@charsize
14137 \advance\@tempdima by \Fld@borderwidth bp %
14138 \advance\@tempdima by \Fld@borderwidth bp %
14139 \edef\Fld@height{\the\@tempdima}%
14140 \fi
14141 \@@ListBox{#3}%
14142 \endgroup
14143 \fi
14144 }%
14145 \endgroup
14146 }
14147 \def\@@Radio#1{%
14148 \Fld@listcount=0 %
14149 \EdefEscapeName\Fld@default{\Fld@default}%
14150 \@for\@curropt:=#1\do{%
14151 \expandafter\Fld@checkequals\@curropt==\%
14152 \EdefEscapeName\@currValue{\@currValue}%
14153 \Hy@StepCount\Fld@listcount
14154 \@currDisplay\space
14155 \leavevmode
14156 \HyAnn@AbsPageLabel

```

```

14157 \Hy@escapeform\PDFForm@Radio
14158 \pdfstartlink user {%
14159 \PDFForm@Radio
14160 /AP<<%
14161 /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.

```

14162 /\@currValue\space \DingObject
14163 >>%
14164 >>%
14165 }%
14166 \relax
14167 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14168 \ifnum\Fld@listcount=1 %
14169 \HyField@AddToFields
14170 \fi
14171 \space % deliberate space between radio buttons
14172 }%
14173 }
14174 \newcount\Fld@listcount
14175 \def\@@Listbox#1{%
14176 \HyField@PDFChoices{#1}%
14177 \leavevmode
14178 \HyAnn@AbsPageLabel
14179 \Hy@escapeform\PDFForm@List
14180 \pdfstartlink user {\PDFForm@List}\relax
14181 \MakeChoiceField{\Fld@width}{\Fld@height}%
14182 \pdfendlink
14183 \HyField@AddToFields
14184 }
14185 \def\@PushButton[#1]#2{% parameters, label
14186 \def\Fld@name{#2}%
14187 \begingroup
14188 \expandafter\HyField@SetKeys\expandafter{%
14189 \DefaultOptionsofPushButton,#1%
14190 }%
14191 \PDFForm@Name
14192 \ifHy@pdfa
14193 \Hy@Error{%
14194 PDF/A: Push button with JavaScript is prohibited%
14195 } \@ehc
14196 \LayoutPushButtonField{%
14197 \leavevmode
14198 \MakeButtonField{#2}%
14199 }%
14200 \else
14201 \HyField@FlagsPushButton
14202 \iffld@hidden\def\Fld@width{1sp}\fi
14203 \LayoutPushButtonField{%
14204 \leavevmode
14205 \HyAnn@AbsPageLabel
14206 \Hy@escapeform\PDFForm@Push
14207 \pdfstartlink user {\PDFForm@Push}\relax
14208 \MakeButtonField{#2}%
14209 \pdfendlink
14210 \HyField@AddToFields

```

```

14211     }%
14212     \fi
14213 \endgroup
14214 }
14215 \def\@Submit[#1]#2{%
14216   \def\Fld@width{\DefaultWidthofSubmit}%
14217   \def\Fld@height{\DefaultHeightofSubmit}%
14218   \begingroup
14219     \expandafter\HyField@SetKeys\expandafter{%
14220       \DefaultOptionsofSubmit,#1%
14221     }%
14222     \HyField@FlagsPushButton
14223     \HyField@FlagsSubmit
14224     \ifFld@hidden\def\Fld@width{1sp}\fi
14225     \leavevmode
14226     \HyAnn@AbsPageLabel
14227     \Hy@escapeform\PDFForm@Submit
14228     \pdfstartlink user {%
14229       \PDFForm@Submit
14230       /AP<</N \SubmitObject/D \SubmitPObject>>%
14231     }%
14232     \relax
14233     \MakeButtonField{#2}%
14234     \pdfendlink
14235     \HyField@AddToFields
14236 \endgroup
14237 }
14238 \def\@Reset[#1]#2{%
14239   \def\Fld@width{\DefaultWidthofReset}%
14240   \def\Fld@height{\DefaultHeightofReset}%
14241   \begingroup
14242     \expandafter\HyField@SetKeys\expandafter{%
14243       \DefaultOptionsofReset,#1%
14244     }%
14245     \leavevmode
14246     \ifHy@pdfa
14247       \Hy@Error{%
14248         PDF/A: Reset action is prohibited%
14249       }\@ehc
14250       \MakeButtonField{#2}%
14251     \else
14252       \HyField@FlagsPushButton
14253       \ifFld@hidden\def\Fld@width{1sp}\fi
14254       \HyAnn@AbsPageLabel
14255       \Hy@escapeform\PDFForm@Reset
14256       \pdfstartlink user {\PDFForm@Reset}\relax
14257       \MakeButtonField{#2}%
14258       \pdfendlink
14259       \HyField@AddToFields
14260     \fi
14261 \endgroup
14262 }
14263 \def\@CheckBox[#1]#2{% parameters, label
14264   \def\Fld@name{#2}%
14265   \def\Fld@default{0}%
14266   \begingroup
14267     \def\Fld@width{\DefaultWidthofCheckBox}%

```



```

14268 \def\Fld@height{\DefaultHeightofCheckBox}%
14269 \expandafter\HyField@SetKeys\expandafter{%
14270 \DefaultOptionsofCheckBox,#1%
14271 }%
14272 \PDFForm@Name
14273 \HyField@FlagsCheckBox
14274 \ifFld@hidden\def\Fld@width{1sp}\fi
14275 \LayoutCheckField{#2}{%
14276 \leavevmode
14277 \HyAnn@AbsPageLabel
14278 \Hy@escapeform\PDFForm@Check
14279 \pdfstartlink user {\PDFForm@Check}\relax
14280 \MakeCheckField{\Fld@width}{\Fld@height}%
14281 \pdfendlink
14282 \HyField@AddToFields
14283 }%
14284 \endgroup
14285 }
14286 \def\Hy@FormObjects{%
14287 \pdfobj {%
14288 <<%
14289 /Type/Encoding%
14290 /Differences[%
14291 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14292 /ring/tilde %
14293 39/quotesingle %
14294 96/grave %
14295 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14296 /fraction/guilsinglleft/guilsingright/minus/perthousand%
14297 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14298 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14299 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14300 164/currency %
14301 166/brokenbar %
14302 168/dieresis/copyright/ordfeminine %
14303 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14304 /twosuperior/threesuperior/acute/mu %
14305 183/periodcentered/cedilla/onesuperior/ordmasculine %
14306 188/onequarter/onehalf/threequarters %
14307 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14308 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14309 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14310 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14311 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14312 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14313 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14314 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14315 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave%
14316 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14317 ]%
14318 >>%
14319 }%
14320 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
14321 \pdfobj{%
14322 <<%
14323 /Type/Font%
14324 /Subtype/Type1%

```

```

14325     /Name/ZaDb%
14326     /BaseFont/ZapfDingbats%
14327     >>%
14328 }%
14329 \xdef\OBJ@ZaDb{\the\pdfastobj}%
14330 \pdfobj{%
14331     <<%
14332     /Type/Font%
14333     /Subtype/Type1%
14334     /Name/Helv%
14335     /BaseFont/Helvetica%
14336     /Encoding \OBJ@pdfdocencoding\space 0 R%
14337     >>%
14338 }%
14339 \xdef\OBJ@Helv{\the\pdfastobj}%
14340 \global\let\Hy@FormObjects\relax
14341 }
14342 \pdfTeX

```

48.5 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.

```
14343 \def\*dvipdfm|xetex
```

\@Gauge

```

14344 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14345   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14346 }

```

\@Form

```

14347 \def\@Form[#1]{%
14348   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14349   \kvsetkeys{Form}{#1}%
14350   \Hy@FormObjects
14351   \@pdfm@mark{obj @afields []}%
14352   \@pdfm@mark{obj @corder []}%
14353   \@pdfm@mark{%
14354     obj @aform <<%
14355     /Fields @afields%
14356     /DR<<%
14357     /Font<<%
14358     /ZaDb @OBJZaDb%
14359     /Helv @OBJHelv%
14360     >>%
14361     >>%
14362     /DA(/Helv 10 Tf 0 g)%
14363     /CO @corder%
14364     \ifHy@pdfa
14365     \else
14366       \ifHyField@NeedAppearances
14367         /NeedAppearances true%
14368       \fi
14369     \fi
14370     >>%
14371   }%
14372   \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14373 }

```

\@endForm

14374 \let\@endForm\ltx@empty

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```
14375 \def\dvipdfm@setdim{%
14376   height \the\ht\pdfm@box\space
14377   width \the\wd\pdfm@box\space
14378   depth \the\dp\pdfm@box\space
14379 }
```

\HyField@AnnotCount

```
14380 \newcount\HyField@AnnotCount
14381 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
14382 \def\HyField@AdvanceAnnotCount{%
14383   \global\advance\HyField@AnnotCount\@ne
14384 }
```

\HyField@TheAnnotCount

```
14385 \def\HyField@TheAnnotCount{%
14386   \the\HyField@AnnotCount
14387 }
```

\Fld@pageobjref

```
14388 \def\Fld@pageobjref{/P @thispage}%
```

\HyField@AddToFields

```
14389 \def\HyField@AddToFields#1{%
14390   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14391   \ifx\Fld@calculate@code\ltx@empty
14392   \else
14393     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14394   \fi
14395 }
```

\@TextField

```
14396 \def\@TextField[#1]#2{% parameters, label
14397   \def\Fld@name{#2}%
14398   \let\Fld@default\ltx@empty
14399   \let\Fld@value\@empty
14400   \def\Fld@width{\DefaultWidthofText}%
14401   \def\Fld@height{%
14402     \ifFld@multiline
14403       \DefaultHeightofTextMultiline
14404     \else
14405       \DefaultHeightofText
14406     \fi
14407   }%
14408   \begingroup
14409     \expandafter\HyField@SetKeys\expandafter{%
14410       \DefaultOptionsofText,#1%
14411     }%
14412     \PDFForm@Name
14413     \HyField@FlagsText
14414     \ifFld@hidden\def\Fld@width{1sp}\fi
```

```

14415 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14416 \setbox\pdfm@box=\hbox{%
14417   \MakeTextField{\Fld@width}{\Fld@height}%
14418 }%
14419 \HyField@AdvanceAnnotCount
14420 \LayoutTextField{#2}{%
14421   \leavevmode
14422   \Hy@escapeform\PDFForm@Text
14423   \@pdfm@mark{%
14424     ann @text\HyField@TheAnnotCount\space
14425     \dvipdfm@setdim << \PDFForm@Text >>%
14426   }%
14427 }%
14428 \unhbox\pdfm@box
14429 \HyField@AddToFields{text}%
14430 % record in @afields array
14431 \endgroup
14432 }

```

\@ChoiceMenu

```

14433 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14434   \def\Fld@name{#2}%
14435   \let\Fld@default\relax
14436   \let\Fld@value\relax
14437   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14438   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14439   \begingroup
14440     \Fld@menulength=0 %
14441     \@tempdima\z@
14442     \@for\@curropt:=#3\do{%
14443       \expandafter\Fld@checkequals\@curropt==\%
14444       \Hy@StepCount\Fld@menulength
14445       \settowidth{\@tempdimb}{\@currDisplay}%
14446       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14447     }%
14448     \advance\@tempdima by 15\p@
14449     \begingroup
14450       \HyField@SetKeys{#1}%
14451     \edef\x{\endgroup
14452       \noexpand\expandafter
14453       \noexpand\HyField@SetKeys
14454       \noexpand\expandafter{%
14455         \expandafter\noexpand\cname DefaultOptionsof%
14456         \ifFld@radio
14457           Radio%
14458         \else
14459           \ifFld@combo
14460             \ifFld@popdown
14461               PopdownBox%
14462             \else
14463               ComboBox%
14464             \fi
14465           \else
14466             ListBox%
14467           \fi
14468         \fi
14469       \endcsname
14470     }%

```

```

14471 } \x
14472 \HyField@SetKeys{#1}%
14473 \PDFForm@Name
14474 \ifFld@hidden\def\Fld@width{1sp}\fi
14475 \ifx\Fld@value\relax
14476 \let\Fld@value\Fld@default
14477 \fi
14478 \LayoutChoiceField{#2}{%
14479 \ifFld@radio
14480 \HyField@FlagsRadioButton
14481 \@@Radio{#3}%
14482 \else
14483 \begingroup
14484 \HyField@FlagsChoice
14485 \ifdim\Fld@width<\@tempdima
14486 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14487 \edef\Fld@width{\the\@tempdima}%
14488 \fi
14489 \ifFld@combo
14490 \else
14491 \@tempdima=\the\Fld@menulength\Fld@charsize
14492 \advance\@tempdima by \Fld@borderwidth bp %
14493 \advance\@tempdima by \Fld@borderwidth bp %
14494 \edef\Fld@height{\the\@tempdima}%
14495 \fi
14496 \@@ListBox{#3}%
14497 \endgroup
14498 \fi
14499 }%
14500 \endgroup
14501 }

```

\@@Radio

```

14502 \def\@@Radio#1{%
14503 \Fld@listcount=0 %
14504 \EdefEscapeName\Fld@default{\Fld@default}%
14505 \setbox\pdfm@box=\hbox{%
14506 \MakeRadioField{\Fld@width}{\Fld@height}%
14507 }%
14508 \@for\@curropt:=#1\do{%
14509 \expandafter\Fld@checkequals\@curropt==\%
14510 \EdefEscapeName\@currValue{\@currValue}%
14511 \Hy@StepCount\Fld@listcount
14512 \@currDisplay\space
14513 \leavevmode
14514 \Hy@escapeform\PDFForm@Radio
14515 \ifnum\Fld@listcount=1 %
14516 \HyField@AdvanceAnnotCount
14517 \fi
14518 \@pdfm@mark{%
14519 ann %
14520 \ifnum\Fld@listcount=1 %
14521 @radio\HyField@TheAnnotCount%
14522 \space
14523 \fi
14524 \dvipdfm@setdim
14525 <<%
14526 \PDFForm@Radio

```

```

14527      /AP<</N<</\@currValue /null>>>>%
14528      >>%
14529  }%
14530  \unhcopy\pdfm@box\space% deliberate space between radio buttons
14531  \ifnum\Fld@listcount=1 %
14532    \HyField@AddToFields{radio}%
14533  \fi
14534  }%
14535  }

\Fld@listcount
14536 \newcount\Fld@listcount

\@@ListBox
14537 \def\@@ListBox#1{%
14538   \HyField@PDFChoices{#1}%
14539   \setbox\pdfm@box=\hbox{%
14540     \MakeChoiceField{\Fld@width}{\Fld@height}%
14541   }%
14542   \leavevmode
14543   \Hy@escapeform\PDFForm@List
14544   \HyField@AdvanceAnnotCount
14545   \@pdfm@mark{%
14546     ann @list\HyField@TheAnnotCount\space
14547     \dvipdfm@setdim
14548     <<\PDFForm@List>>%
14549   }%
14550   \unhbox\pdfm@box
14551   \HyField@AddToFields{list}%
14552  }

\@PushButton
14553 \def\@PushButton[#1]#2{% parameters, label
14554   \def\Fld@name{#2}%
14555   \begingroup
14556     \expandafter\HyField@SetKeys\expandafter{%
14557       \DefaultOptionsofPushButton,#1%
14558     }%
14559     \PDFForm@Name
14560     \ifHy@pdfa
14561       \Hy@Error{%
14562         PDF/A: Push button with JavaScript is prohibited%
14563       }\@ehc
14564       \LayoutPushButtonField{%
14565         \leavevmode
14566         \MakeButtonField{#2}%
14567       }%
14568     \else
14569       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14570       \HyField@FlagsPushButton
14571       \ifFld@hidden\def\Fld@width{1sp}\fi
14572       \HyField@AdvanceAnnotCount
14573       \LayoutPushButtonField{%
14574         \leavevmode
14575         \Hy@escapeform\PDFForm@Push
14576         \@pdfm@mark{%
14577           ann @push\HyField@TheAnnotCount\space

```

```

14578      \dvipdfm@setdim
14579      <<\PDFForm@Push>>%
14580    }%
14581  }%
14582  \unhbox\pdfm@box
14583  \HyField@AddToFields{push}%
14584  \fi
14585  \endgroup
14586 }

\@Submit
14587 \def\@Submit[#1]#2{%
14588   \def\Fld@width{\DefaultWidthofSubmit}%
14589   \def\Fld@height{\DefaultHeightofSubmit}%
14590   \begingroup
14591     \expandafter\HyField@SetKeys\expandafter{%
14592       \DefaultOptionsofSubmit,#1%
14593     }%
14594     \HyField@FlagsPushButton
14595     \HyField@FlagsSubmit
14596     \ifFld@hidden\def\Fld@width{1sp}\fi
14597     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14598     \leavevmode
14599     \Hy@escapeform\PDFForm@Submit
14600     \HyField@AdvanceAnnotCount
14601     \@pdfm@mark{%
14602       ann @submit\HyField@TheAnnotCount\space
14603       \dvipdfm@setdim
14604       <<\PDFForm@Submit>>%
14605     }%
14606     \unhbox\pdfm@box%
14607     \HyField@AddToFields{submit}%
14608   \endgroup
14609 }

\@Reset
14610 \def\@Reset[#1]#2{%
14611   \def\Fld@width{\DefaultWidthofReset}%
14612   \def\Fld@height{\DefaultHeightofReset}%
14613   \begingroup
14614     \expandafter\HyField@SetKeys\expandafter{%
14615       \DefaultOptionsofReset,#1%
14616     }%
14617     \leavevmode
14618     \ifHy@pdfa
14619       \Hy@Error{%
14620         PDF/A: Reset action is prohibited%
14621       } \@ehc
14622       \MakeButtonField{#2}%
14623     \else
14624       \HyField@FlagsPushButton
14625       \ifFld@hidden\def\Fld@width{1sp}\fi
14626       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14627       \Hy@escapeform\PDFForm@Reset
14628       \HyField@AdvanceAnnotCount
14629       \@pdfm@mark{%
14630         ann @reset\HyField@TheAnnotCount\space

```

```

14631 \dviPDFm@setdim
14632 <<\PDFForm@Reset>>%
14633 }%
14634 \unhbox\pdfm@box
14635 \HyField@AddToFields{reset}%
14636 \fi
14637 \endgroup
14638 }

```

\@CheckBox

```

14639 \def\@CheckBox[#1]#2{% parameters, label
14640 \def\Fld@name{#2}%
14641 \def\Fld@default{0}%
14642 \begingroup
14643 \def\Fld@width{\DefaultWidthofCheckBox}%
14644 \def\Fld@height{\DefaultHeightofCheckBox}%
14645 \expandafter\HyField@SetKeys\expandafter{%
14646 \DefaultOptionsofCheckBox,#1%
14647 }%
14648 \PDFForm@Name
14649 \HyField@FlagsCheckBox
14650 \ifFld@hidden\def\Fld@width{1sp}\fi
14651 \setbox\pdfm@box=\hbox{%
14652 \MakeCheckField{\Fld@width}{\Fld@height}%
14653 }%
14654 \HyField@AdvanceAnnotCount
14655 \LayoutCheckField{#2}{%
14656 \leavevmode
14657 \Hy@escapeform\PDFForm@Check
14658 \@pdfm@mark{%
14659 ann @check\HyField@TheAnnotCount\space
14660 \dviPDFm@setdim
14661 <<\PDFForm@Check>>%
14662 }%
14663 \unhbox\pdfm@box
14664 \HyField@AddToFields{check}%
14665 }%
14666 \endgroup
14667 }

14668 \def\Hy@FormObjects{%
14669 \@pdfm@mark{obj @OBJpdfdocencoding%
14670 <<%
14671 /Type/Encoding%
14672 /Differences[%
14673 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14674 39/quotesingle %
14675 96/grave %
14676 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14677 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14678 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14679 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14680 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14681 164/currency %
14682 166/brokenbar %
14683 168/dieresis/copyright/ordfeminine %
14684 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14685 /twosuperior/threesuperior/acute/mu %

```



```

14686 183/periodcentered/cedilla/onesuperior/ordmasculine %
14687 188/onequarter/onehalf/threequarters %
14688 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14689 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14690 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14691 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14692 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14693 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14694 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14695 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14696 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14697 /thorn/ydieresis%
14698 ]%
14699 >>%
14700 }%
14701 \@pdfm@mark{obj @OBJZaDb%
14702 <<%
14703 /Type/Font%
14704 /Subtype/Type1%
14705 /Name/ZaDb%
14706 /BaseFont/ZapfDingbats%
14707 >>%
14708 }%
14709 \@pdfm@mark{obj @OBJHelv%
14710 <<%
14711 /Type/Font%
14712 /Subtype/Type1%
14713 /Name/Helv%
14714 /BaseFont/Helvetica%
14715 /Encoding @OBJpdfdocencoding%
14716 >>%
14717 }%
14718 \global\let\Hy@FormObjects\relax
14719 }
14720 </dvipdfm | xetex>

```

48.6 Common forms part

```

14721 (*pdfmform)

\Fld@pageobjref

14722 \providecommand*{\Fld@pageobjref}{}

\Hy@escapestring

14723 \begingroup\expandafter\expandafter\expandafter\endgroup
14724 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14725 \let\Hy@escapestring\@firstofone
14726 \def\Hy@escapeform#1{%
14727 \ifHy@pdfescapeform
14728 \def\Hy@escapestring###1{%
14729 \noexpand\Hy@escapestring{\noexpand##1}%
14730 }%
14731 \edef\Hy@temp{#1}%
14732 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14733 \def\Hy@escapestring###1{%
14734 \ifundefined{Hy@esc@string##1}{%
14735 ##1%

```

```

14736      \ThisShouldNotHappen
14737      }{%
14738      \csname Hy@esc@\string##1\endcsname
14739      }%
14740      }%
14741      \else
14742      \let\Hy@escapestring\@firstofone
14743      \fi
14744      }%
14745      \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14746      \ifx\#3\%
14747      \else
14748      \expandafter
14749      \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14750      \ltx@ReturnAfterFi{%
14751      \Hy@@escapeform#3\@nil
14752      }%
14753      \fi
14754      }%
14755      \else
14756      \def\Hy@escapeform#1{%
14757      \ifHy@pdfescapeform
14758      \let\Hy@escapestring\pdfescapestring
14759      \else
14760      \let\Hy@escapestring\@firstofone
14761      \fi
14762      }%
14763      \Hy@escapeform{}%
14764      \fi

```

\PDFForm@Name

```

14765 \def\PDFForm@Name{%
14766 \PDFForm@@Name\Fld@name
14767 \ifx\Fld@altname\relax
14768 \else
14769 \PDFForm@@Name\Fld@altname
14770 \fi
14771 \ifx\Fld@mappingname\relax
14772 \else
14773 \PDFForm@@Name\Fld@mappingname
14774 \fi
14775 }

```

\PDFForm@@Name

```

14776 \def\PDFForm@@Name#1{%
14777 \begingroup
14778 \ifnum\Hy@pdf@majorminor@version<105 % implementation note 117, PDF spec 1.7
14779 \ifHy@unicode
14780 \Hy@unicodetrue
14781 \fi
14782 \fi
14783 \HyPsd@XeTeXBigCharstrue
14784 \pdfstringdef\Hy@gtemp#1%
14785 \endgroup
14786 \let#1\Hy@gtemp
14787 }

```

\Fld@additionalactions

```

14788 \def\Fld@@additionalactions{%
K input (keystroke) format
14789 \ifx\Fld@keystroke@code\@empty
14790 \else
14791 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14792 \fi
F display format
14793 \ifx\Fld@format@code\@empty
14794 \else
14795 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14796 \fi
V validation
14797 \ifx\Fld@validate@code\@empty
14798 \else
14799 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14800 \fi
C calculation
14801 \ifx\Fld@calculate@code\@empty
14802 \else
14803 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14804 \fi
Fo receiving the input focus
14805 \ifx\Fld@onfocus@code\@empty
14806 \else
14807 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14808 \fi
Bl loosing the input focus (blurred)
14809 \ifx\Fld@onblur@code\@empty
14810 \else
14811 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14812 \fi
D pressing the mouse button (down)
14813 \ifx\Fld@onmousedown@code\@empty
14814 \else
14815 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14816 \fi
U releasing the mouse button (up)
14817 \ifx\Fld@onmouseup@code\@empty
14818 \else
14819 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14820 \fi
E cursor enters the annotation's active area.
14821 \ifx\Fld@onenter@code\@empty
14822 \else
14823 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14824 \fi
X cursor exits the annotation's active area.
14825 \ifx\Fld@onexit@code\@empty
14826 \else
14827 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14828 \fi

```

```

14829 }
14830 \def\Fld@additionalactions{%
14831   \if\Fld@@additionalactions-%
14832   \else
14833     \ifHy@pdfa
14834     \else
14835       /AA<<\Fld@@additionalactions>>%
14836     \fi
14837   \fi
14838 }

\Fld@annotnames
14839 \def\Fld@annotnames{%
14840   /T(\Fld@name)%
14841   \ifx\Fld@altname\relax
14842   \else
14843     /TU(\Fld@altname)%
14844   \fi
14845   \ifx\Fld@mappingname\relax
14846   \else
14847     /TM(\Fld@mappingname)%
14848   \fi
14849 }

\PDFForm@Check
14850 \def\PDFForm@Check{%
14851   /Subtype/Widget%
14852   \Fld@annotflags
14853   \Fld@pageobjref
14854   \Fld@annotnames
14855   /FT/Btn%
14856   \Fld@flags
14857   /Q \Fld@align
14858   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14859   /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14860   /MK<<%
14861     \ifnum\Fld@rotation=z@
14862     \else
14863       /R \Fld@rotation
14864     \fi
14865     \ifx\Fld@bordercolor\relax
14866     \else
14867       /BC[\Fld@bordercolor]%
14868     \fi
14869     \ifx\Fld@bcolor\relax
14870     \else
14871       /BG[\Fld@bcolor]%
14872     \fi
14873     /CA(\Hy@escapestring{\Fld@cbsymbol})%
14874   >>%
14875   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14876     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14877   /H/P%
14878   \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14879   \Fld@additionalactions
14880 }

\PDFForm@Push

```

```

14881 \ifHy@pdfa
14882 \else
14883 \def\PDFForm@Push{%
14884 /Subtype/Widget%
14885 \Fld@annotflags
14886 \Fld@pageobjref
14887 \Fld@annotnames
14888 /FT/Btn%
14889 \Fld@flags
14890 /H/P%
14891 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14892 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14893 \ifx\Fld@bordercolor\relax\else 1\fi
14894 \space
14895 \else
14896 /MK<<%
14897 \ifnum\Fld@rotation=\z@
14898 \else
14899 /R \Fld@rotation
14900 \fi
14901 \ifx\Fld@bordercolor\relax
14902 \else
14903 /BC[\Fld@bordercolor]%
14904 \fi
14905 >>%
14906 \fi
14907 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14908 \Fld@additionalactions
14909 }%
14910 \fi

```

\PDFForm@List

```

14911 \def\PDFForm@List{%
14912 /Subtype/Widget%
14913 \Fld@annotflags
14914 \Fld@pageobjref
14915 \Fld@annotnames
14916 /FT/Ch%
14917 \Fld@flags
14918 /Q \Fld@align
14919 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14920 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14921 \ifx\Fld@bordercolor\relax\else 1\fi
14922 \ifx\Fld@bcolor\relax \else 1\fi
14923 \space
14924 \else
14925 /MK<<%
14926 \ifnum\Fld@rotation=\z@
14927 \else
14928 /R \Fld@rotation
14929 \fi
14930 \ifx\Fld@bordercolor\relax
14931 \else
14932 /BC[\Fld@bordercolor]%
14933 \fi
14934 \ifx\Fld@bcolor\relax
14935 \else
14936 /BG[\Fld@bcolor]%

```

```

14937     \fi
14938     >>%
14939 \fi
14940 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14941     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14942 \Fld@choices
14943 \Fld@additionalactions
14944 }

```

\PDFForm@Radio

```

14945 \def\PDFForm@Radio{%
14946 /Subtype/Widget%
14947 \Fld@annotflags
14948 \Fld@pageobjref
14949 \Fld@annotnames
14950 /FT/Btn%
14951 \Fld@flags
14952 /H/P%
14953 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14954 /MK<<%
14955     \ifnum\Fld@rotation=\z@
14956     \else
14957         /R \Fld@rotation
14958     \fi
14959     \ifx\Fld@bordercolor\relax
14960     \else
14961         /BC[\Fld@bordercolor]%
14962     \fi
14963     \ifx\Fld@bcolor\relax
14964     \else
14965         /BG[\Fld@bcolor]%
14966     \fi
14967     /CA(\Hy@escapestring{\Fld@radiosymbol})%
14968 >>%
14969 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14970     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14971 \ifx\Fld@default\@empty
14972     /V/Off%
14973     /DV/Off%
14974 \else
14975     /V/\Fld@default
14976     /DV/\Fld@default
14977 \fi
14978 \Fld@additionalactions
14979 }

```

\PDFForm@Text

```

14980 \def\PDFForm@Text{%
14981 /Subtype/Widget%
14982 \Fld@annotflags
14983 \Fld@pageobjref
14984 \Fld@annotnames
14985 /FT/Tx%
14986 \Fld@flags
14987 /Q \Fld@align
14988 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%

```

```

14989 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14990 \ifx\Fld@bordercolor\relax\else 1\fi
14991 \ifx\Fld@bcolor\relax \else 1\fi
14992 \space
14993 \else
14994 /MK<<%
14995 \ifnum\Fld@rotation=\z@
14996 \else
14997 /R \Fld@rotation
14998 \fi
14999 \ifx\Fld@bordercolor\relax
15000 \else
15001 /BC[\Fld@bordercolor]%
15002 \fi
15003 \ifx\Fld@bcolor\relax
15004 \else
15005 /BG[\Fld@bcolor]%
15006 \fi
15007 >>%
15008 \fi
15009 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
15010 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
15011 /DV(\Hy@escapestring{\Fld@default})%
15012 /V(\Hy@escapestring{\Fld@value})%
15013 \Fld@additionalactions
15014 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
15015 }

```

\PDFForm@Submit

```

15016 \def\PDFForm@Submit{%
15017 /Subtype/Widget%
15018 \Fld@annotflags
15019 \Fld@pageobjref
15020 \Fld@annotnames
15021 /FT/Btn%
15022 \Fld@flags
15023 /H/P%
15024 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15025 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15026 \ifx\Fld@bordercolor\relax\else 1\fi
15027 \space
15028 \else
15029 /MK<<%
15030 \ifnum\Fld@rotation=\z@
15031 \else
15032 /R \Fld@rotation
15033 \fi
15034 \ifx\Fld@bordercolor\relax
15035 \else
15036 /BC[\Fld@bordercolor]%
15037 \fi
15038 >>%
15039 \fi
15040 /A<<%
15041 /S/SubmitForm%
15042 /F<<%
15043 /FS/URL%
15044 /F(\Hy@escapestring{\Form@action})%

```

```

15045 >>%
15046 \Fld@submitflags
15047 >>%
15048 \Fld@additionalactions
15049 }

```

\PDFForm@Reset

```

15050 \ifHy@pdfa
15051 \else
15052 \def\PDFForm@Reset{%
15053 /Subtype/Widget%
15054 \Fld@annotflags
15055 \Fld@pageobjref
15056 \Fld@annotnames
15057 /FT/Btn%
15058 \Fld@flags
15059 /H/P%
15060 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
15061 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15062 \ifx\Fld@bordercolor\relax\else 1\fi
15063 \space
15064 \else
15065 /MK<<%
15066 \ifnum\Fld@rotation=\z@
15067 \else
15068 /R \Fld@rotation
15069 \fi
15070 \ifx\Fld@bordercolor\relax
15071 \else
15072 /BC[\Fld@bordercolor]%
15073 \fi
15074 % /CA (Clear)
15075 % /AC (Done)
15076 >>%
15077 \fi
15078 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15079 /A<</S/ResetForm>>%
15080 \Fld@additionalactions
15081 }%
15082 \fi

15083 </pdfform>
15084 <*package>

```

49 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 L^AT_EX 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`

```

15085 \def\phantomsection{%
15086 \Hy@MakeCurrentHrefAuto{section*}%

```



```

15087 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15088 }
15089 </package>

```

49.1 Bookmarks

```
15090 <*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -TeX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -TeX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```

15091 \def\Hy@writebookmark#1#2#3#4#5{%
15092   % section number, text, label, level, file
15093   \ifx\WriteBookmarks\relax%
15094   \else
15095     \ifnum#4>\Hy@bookmarksdepth\relax
15096     \else
15097       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
15098     \fi
15099   \fi
15100 }
15101 \def\Hy@currentbookmarklevel{0}
15102 \def\Hy@numberline#1{#1 }
15103 \def\@@writetorep#1#2#3#4#5{%
15104   \begingroup
15105     \edef\Hy@tempa{#5}%
15106     \ifx\Hy@tempa\Hy@bookmarkstype
15107       \edef\Hy@level{#4}%
15108       \ifx\Hy@levelcheck Y%
15109         \@tempcnta\Hy@level\relax
15110         \advance\@tempcnta by -1 %
15111         \ifnum\Hy@currentbookmarklevel<\@tempcnta
15112           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15113           \advance\@tempcnta by 1 %
15114           \Hy@Warning{%
15115             Difference (\the\@tempcnta) between bookmark levels is %
15116             greater \MessageBreak than one, level fixed%
15117           }%
15118           \@tempcnta\Hy@currentbookmarklevel
15119           \advance\@tempcnta by 1 %
15120           \edef\Hy@level{\the\@tempcnta}%
15121         \fi
15122       \else

```

```

15123     \global\let\Hy@levelcheck Y%
15124 \fi
15125 \global\let\Hy@currentbookmarklevel\Hy@level
15126 \@tempcnta\Hy@level\relax
15127 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15128 \advance\@tempcnta by -1 %
15129 \edef\Hy@tempa{#3}%
15130 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15131 \ifx\Hy@tempa\Hy@tempb
15132   \Hy@Warning{%
15133     The anchor of a bookmark and its parent's must not%
15134     \MessageBreak be the same. Added a new anchor%
15135   }%
15136   \phantomsection
15137 \fi
15138 \ifHy@bookmarksnumbered
15139   \let\numberline\Hy@numberline
15140   \let\booknumberline\Hy@numberline
15141   \let\partnumberline\Hy@numberline
15142   \let\chapternumberline\Hy@numberline
15143 \else
15144   \let\numberline\@gobble
15145   \let\booknumberline\@gobble
15146   \let\partnumberline\@gobble
15147   \let\chapternumberline\@gobble
15148 \fi
15149 \HyPsd@XeTeXBigCharstrue
15150 \pdfstringdef\Hy@tempa{#2}%
15151 \HyPsd@SanitizeForOutFile\Hy@tempa
15152 \if@filesw
15153   \stepcounter{bookmark@seq@number}%
15154   \@ifundefined{@outlinefile}{%
15155     }{%
15156       \protected@write\@outlinefile{}{%
15157         \protect\BOOKMARK
15158         [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15159         {\Hy@tempa}{\Hy@tempb}%
15160         \@percentchar\space\thebookmark@seq@number
15161       }%
15162     }%
15163   \fi
15164 \fi
15165 \endgroup
15166 }
15167 \newcounter{bookmark@seq@number}
15168 \begingroup
15169 \lccode`(`=\`{%
15170 \lccode`)`=\`}%
15171 \lccode`1`=\z@
15172 \lccode`2`=\z@
15173 \lccode`3`=\z@
15174 \lccode`5`=\z@
15175 \lccode`7`=\z@
15176 \lccode`\#`=\z@
15177 \lccode`` `=\z@
15178 \lccode`\{`=\z@
15179 \lccode`\}`=\z@

```

```

15180 \lowercase{%
15181 \endgroup
15182 \def\HyPsd@SanitizeForOutFile#1{%
15183   \@onelevel@sanitize\Hy@tempa
15184   \escapechar`\\%
15185   \edef\Hy@tempa{%
15186     \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
15187   }%
15188   \edef\Hy@tempa{%
15189     \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
15190   }%
15191 }%
15192 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15193   #1%
15194   \ifx\\#2\\%
15195     \expandafter\ltx@gobble
15196   \else
15197     \expandafter\ltx@firstofone
15198   \fi
15199   {%
15200     \string\173%
15201     \HyPsd@SanitizeOut@BraceLeft#2\@nil
15202   }%
15203 }%
15204 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15205   #1%
15206   \ifx\\#2\\%
15207     \expandafter\ltx@gobble
15208   \else
15209     \expandafter\ltx@firstofone
15210   \fi
15211   {%
15212     \string\175%
15213     \HyPsd@SanitizeOut@BraceRight#2\@nil
15214   }%
15215 }%
15216 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

15217 \newcommand{\currentpdfbookmark}{%
15218   \pdfbookmark[\Hy@currentbookmarklevel]%
15219 }
15220 \newcommand{\subpdfbookmark}{%
15221   \@tempcnta\Hy@currentbookmarklevel
15222   \Hy@StepCount\@tempcnta
15223   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15224 }
15225 \newcommand{\belowpdfbookmark}[2]{%
15226   \@tempcnta\Hy@currentbookmarklevel
15227   \Hy@StepCount\@tempcnta
15228   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15229   \advance\@tempcnta by -1 %
15230   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15231 }

```

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.

```

15232 \renewcommand\pdfbookmark[3][0]{%
15233   \Hy@writebookmark{}{#2}{#3.#1}{#1}{toc}%
15234   \hyper@anchorstart{#3.#1}\hyper@anchorend
15235 }
15236 \def\BOOKMARK{%
15237   \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
15238 }
15239 \def\@BOOKMARK[#1]{%
15240   \@ifnextchar[{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
15241 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the texinfo_{pdf} macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

15242 \RequirePackage{rerunfilecheck}[2009/12/10]
15243 \def\Hy@OutlineRerunCheck{%
15244   \RerunFileCheck{jobname.out}{%
15245     \immediate\closeout\@outlinefile
15246   }{%
15247     Rerun to get outlines right\MessageBreak
15248     or use package `bookmark'%
15249   }%
15250 }

```

49.1.2 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.

```

15251 <*vtex>
15252 \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.

```

15253 \begingroup
15254   \catcode`\'=12 %
15255   \ifnum\Hy@VTeXversion<650 %
15256     \catcode`\=12 %
15257     \gdef\hv@pdf@char#1#2#3{%
15258       \char
15259       \ifcase'#1#2#3 %
15260         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15261         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15262         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
15263         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15264         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15265         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15266         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15267         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15268         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15269         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%

```

```

15270 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15271 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15272 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15273 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15274 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15275 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15276 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15277 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15278 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15279 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15280 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15281 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15282 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15283 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15284 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15285 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15286 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15287 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15288 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15289 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15290 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15291 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15292 \fi
15293 }%
15294 \else
15295 \gdef\hv@pdf@char{\char'}%
15296 \fi
15297 \endgroup

```

\@@BOOKMARK

```

15298 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15299 \expandafter\edef\csname @count@#3\endcsname{%
15300 \the\@serial@counter
15301 }%
15302 \edef\@mycount{\the\@serial@counter}%
15303 \Hy@StepCount\@serial@counter
15304 \edef\@parcount{%
15305 \expandafter\ifx\csname @count@#5\endcsname\relax
15306 0%
15307 \else
15308 \csname @count@#5\endcsname
15309 \fi
15310 }%
15311 \immediate\special{%
15312 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15313 s=\ifx#2-c\else o\fi,t=#4%
15314 }%
15315 }%

```

\ReadBookmarks

```

15316 \def\ReadBookmarks{%
15317 \begingroup
15318 \def\0{\hv@pdf@char 0}%
15319 \def\1{\hv@pdf@char 1}%
15320 \def\2{\hv@pdf@char 2}%
15321 \def\3{\hv@pdf@char 3}%
15322 \def\{({}%

```

```

15323 \def\){})}%
15324 \def\do###1{%
15325 \ifnum\catcode`###1=\active
15326 \@makeother###1%
15327 \else
15328 \ifnum\catcode`###1=6 %
15329 \@makeother###1%
15330 \fi
15331 \fi
15332 }%
15333 \dospecials
15334 \Hy@safe@activetrue
15335 \InputIfFileExists{\jobname.out}{-}{-}%
15336 \endgroup
15337 \ifx\WriteBookmarks\relax
15338 \else
15339 \if@filesw
15340 \newwrite\@outlinefile
15341 \Hy@OutlineRerunCheck
15342 \immediate\openout\@outlinefile=\jobname.out\relax
15343 \ifHy@typexml
15344 \immediate\write\@outlinefile{<relaxxml>\relax}%
15345 \fi
15346 \fi
15347 \fi
15348 }

15349 </vtex>
15350 (*!vtex)
15351 \def\ReadBookmarks{%
15352 \pdf@ifdraftmode{-}{-}%
15353 \begingroup
15354 \def\do###1{%
15355 \ifnum\catcode`###1=\active
15356 \@makeother###1%
15357 \else
15358 \ifnum\catcode`###1=6 %
15359 \@makeother###1%
15360 \fi
15361 \fi
15362 }%
15363 \dospecials
15364 \Hy@safe@activetrue
15365 \escapechar=\\%
15366 \def\@@BOOKMARK[##1][##2]##3##4##5{%
15367 \calc@bm@number{##5}%
15368 }%
15369 \InputIfFileExists{\jobname.out}{-}{-}%
15370 \ifx\WriteBookmarks\relax
15371 \global\let\WriteBookmarks\relax
15372 \fi
15373 \def\@@BOOKMARK[##1][##2]##3##4##5{%
15374 \def\Hy@temp{##4}%
15375 (*pdfTeX)
15376 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15377 \Hy@OutlineName{-}\Hy@pstringName{%
15378 ##2\check@bm@number{##3}%
15379 }%

```

```

15380     \expandafter\strip@prefix\meaning\Hy@temp
15381   }%
15382 </pdftex>
15383 <*pdfmark>
15384   \pdfmark{%
15385     pdfmark=/OUT,%
15386     Count={##2\check@bm@number{##3}},%
15387     Dest={##3},%
15388     Title=\expandafter\strip@prefix\meaning\Hy@temp
15389   }%
15390 </pdfmark>
15391 <*dvipdfm|xetex>
15392   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15393   \@pdfm@mark{%
15394     outline \ifHy@DvipdfmxOutlineOpen
15395       [%
15396       \ifnum##21>\z@
15397       \else
15398       -%
15399       \fi
15400     ] %
15401     \fi
15402     ##1<<%
15403     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15404     /A<<%
15405     /S/GoTo%
15406     /D(\Hy@pstringName)%
15407     >>%
15408     >>%
15409   }%
15410 </dvipdfm|xetex>
15411   }%
15412   \begingroup
15413     \def\WriteBookmarks{0}%
15414     \InputIfFileExists{\jobname.out}{\{}}{}%
15415   \endgroup
15416   %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{\{}}{}}%
15417 \endgroup
15418 }%
15419 \ifx\WriteBookmarks\relax
15420 \else
15421   \if@filesw
15422     \newwrite\@outlinefile
15423     \Hy@OutlineRerunCheck
15424     \immediate\openout\@outlinefile=\jobname.out\relax
15425     \ifHy@typexml
15426       \immediate\write\@outlinefile{<relaxxml>\relax}%
15427     \fi
15428   \fi
15429 \fi
15430 }
15431 <*pdftex>
15432 \def\Hy@OutlineName#1#2#3#4{%
15433   \pdfoutline goto name{#2}count#3{#4}%
15434 }
15435 </pdftex>
15436 \def\check@bm@number#1{%

```

```

15437 \expandafter\ifx\csname B_#1\endcsname\relax
15438 0%
15439 \else
15440 \csname B_#1\endcsname
15441 \fi
15442 }
15443 \def\calc@bm@number#1{%
15444 \@tempcnta=\check@bm@number{#1}\relax
15445 \advance\@tempcnta by 1 %
15446 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15447 }
15448 </!vtx>

15449 \ifHy@implicit
15450 \else
15451 \expandafter\endinput
15452 \fi

15453 </outlines>
15454 <*outlines | hypertex>

15455 \newlength\Hy@SectionHShift
15456 \def\Hy@SectionAnchorHref#1{%
15457 \ifx\protect\@typeset@protect
15458 \Hy@@@SectionAnchor{#1}%
15459 \fi
15460 }
15461 \DeclareRobustCommand*\Hy@@@SectionAnchor}[1]{%
15462 \leavevmode
15463 \hbox to 0pt{%
15464 \kern-\Hy@SectionHShift
15465 \Hy@raisedlink{%
15466 \hyper@anchorstart{#1}\hyper@anchorend
15467 }%
15468 \hss
15469 }%
15470 }
15471 \let\H@old@ssect\@ssect
15472 \def\@ssect#1#2#3#4#5{%
15473 \Hy@MakeCurrentHrefAuto{section*}%
15474 \setlength{\Hy@SectionHShift}{#1}%
15475 \begingroup
15476 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15477 \toks\tw@\expandafter{%
15478 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15479 #5%
15480 }%
15481 \edef\x{\endgroup
15482 \the\toks@{\the\toks\tw@}}%
15483 }\x
15484 }
15485 \let\H@old@schapter\@schapter
15486 \def\@schapter#1{%
15487 \begingroup
15488 \let\@mkboth\@gobbletwo
15489 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15490 \Hy@raisedlink{%
15491 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15492 }%

```



```

15493 \endgroup
15494 \H@old@chapter{#1}%
15495 }

```

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:

```

15496 \ltx@ifundefined{@chapter}{}{%
15497   \let\Hy@org@chapter\@chapter
15498   \def\@chapter{%
15499     \def\Hy@next{%
15500       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15501       \Hy@raisedlink{%
15502         \hyper@anchorstart{\@currentHref}\hyper@anchorend
15503       }%
15504     }%
15505     \ifnum\c@secnumdepth>\m@ne
15506       \ltx@ifundefined{if@mainmatter}%
15507       \iftrue{\csname if@mainmatter\endcsname}%
15508       \let\Hy@next\relax
15509     \fi
15510     \fi
15511     \Hy@next
15512     \Hy@org@chapter
15513   }%
15514 }

15515 \let\H@old@part\@part
15516 \begingroup\expandafter\expandafter\expandafter\endgroup
15517 \expandafter\ifx\csname chapter\endcsname\relax
15518   \let\Hy@secnum@part\z@
15519 \else
15520   \let\Hy@secnum@part\m@ne
15521 \fi
15522 \def\@part{%
15523   \ifnum\Hy@secnum@part>\c@secnumdepth
15524     \phantomsection
15525     \fi
15526   \H@old@part
15527 }

15528 \let\H@old@spart\@spart
15529 \def\@spart#1{%
15530   \Hy@MakeCurrentHrefAuto{part*}%
15531   \Hy@raisedlink{%
15532     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15533   }%
15534   \H@old@spart{#1}%
15535 }

15536 \let\H@old@sect\@sect
15537 \def\@sect#1#2#3#4#5#6[#7]#8{%
15538   \ifnum #2>\c@secnumdepth
15539     \expandafter\@firstoftwo
15540   \else
15541     \expandafter\@secondoftwo
15542   \fi
15543   {%
15544     \Hy@MakeCurrentHrefAuto{section*}%
15545     \setlength{\Hy@SectionHShift}{#3}%

```

```

15546 \begingroup
15547 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{{#7}}}%
15548 \toks\tw@\expandafter{%
15549 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15550 #8%
15551 }%
15552 \edef\x{\endgroup
15553 \the\toks@{\the\toks\tw@}%
15554 }\x
15555 }{%
15556 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{{#7}{{#8}}}%
15557 }%
15558 }

15559 </outlines | hypertex>
15560 <*outlines>

15561 \expandafter\def\csname Parent-4\endcsname{}
15562 \expandafter\def\csname Parent-3\endcsname{}
15563 \expandafter\def\csname Parent-2\endcsname{}
15564 \expandafter\def\csname Parent-1\endcsname{}
15565 \expandafter\def\csname Parent0\endcsname{}
15566 \expandafter\def\csname Parent1\endcsname{}
15567 \expandafter\def\csname Parent2\endcsname{}
15568 \expandafter\def\csname Parent3\endcsname{}
15569 \expandafter\def\csname Parent4\endcsname{}

15570 </outlines>

```

50 Compatibility with koma-script classes

```

15571 <*outlines | hypertex>

```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for Tobias Isenberg (Tobias.Isenberg@gmx.de). With version 6.71b the hack is also applied to ‘scrreprt’ class and is removed for koma-script versions since 2001/01/01, because Markus Kohm supports hyperref in komascript.

```

15572 \def\Hy@tempa{%
15573 \def\@addchap{##1}##2{%
15574 \typeout{##2}%
15575 \if@twoside
15576 \@mkboth{##1}{}%
15577 \else
15578 \@mkboth{}{##1}%
15579 \fi
15580 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15581 \addtocontents{lot}{\protect\addvspace{10\p@}}%
15582 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15583 \Hy@raisedlink{%
15584 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15585 }%
15586 \if@twocolumn
15587 \@topnewpage[\@makeschapterhead{##2}]%
15588 \else
15589 \@makeschapterhead{##2}%
15590 \@afterheading
15591 \fi
15592 \addcontentsline{toc}{chapter}{##1}%
15593 }%

```

```

15594 }
15595 \@ifclassloaded{scrbook}{%
15596   \@ifclasslater{scrbook}{2001/01/01}{%
15597     \let\Hy@tempa\@empty
15598   }{}%
15599 }{%
15600   \@ifclassloaded{scrreprt}{%
15601     \@ifclasslater{scrreprt}{2001/01/01}{%
15602       \let\Hy@tempa\@empty
15603     }{}%
15604   }{%
15605     \let\Hy@tempa\@empty
15606   }%
15607 }%
15608 \Hy@tempa
15609 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15610 <*pd1enc>
15611 \DeclareFontEncoding{PD1}{}{}

Accents
15612 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15613 \DeclareTextAccent{\'}{PD1}{\textacute}
15614 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15615 \DeclareTextAccent{\~}{PD1}{\texttilde}
15616 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
15617 \DeclareTextAccent{\r}{PD1}{\textring}
15618 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15619 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15620 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15621 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
15622 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15623 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15624 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
15625 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15626 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
15627 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15628 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
15629 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
15630 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15631 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15632 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15633 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
15634 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15635 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15636 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15637 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15638 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15639 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15640 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}

```

```

15641 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textstring}
15642 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15643 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15644 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15645 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15646 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15647 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15648 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15649 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15650 \DeclareTextCommand{\newtie}{PD1}[1]{%
15651   \TextSymbolUnavailable{\newtie{#1}}#1%
15652 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

15653 % U+0009 (CHARACTER TABULATION)
15654 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15655 % U+000A (LINE FEED)
15656 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15657 % U+000D (CARRIAGE RETURN)
15658 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15659 % U+02D8 BREVE; breve
15660 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15661 % U+02C7 CARON; caron
15662 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15663 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15664 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15665 % U+02D9 DOT ABOVE; dotaccent
15666 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15667 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15668 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15669 % U+02DB OGONEK; ogonek
15670 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15671 % U+02DA RING ABOVE; ring
15672 \DeclareTextCommand{\textstring}{PD1}{\036}% U+02DA
15673 % U+02DC SMALL TILDE; ilde, *tilde
15674 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

```

15675 % U+0022 QUOTATION MARK; quotedbl
15676 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
15677 % U+0023 NUMBER SIGN; numbersign
15678 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
15679 % U+0024 DOLLAR SIGN; dollar
15680 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
15681 % U+0025 PERCENT SIGN; percent
15682 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
15683 % U+0026 AMPERSAND; ampersand
15684 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

```

15685 % U+0028 LEFT PARENTHESIS; parenleft
15686 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
15687 % U+0029 RIGHT PARENTHESIS; parenright
15688 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
15689 % U+002E FULL STOP; period
15690 \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
15691 % U+003C LESS-THAN SIGN; less
15692 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

\075: U+003D EQUALS SIGN; equal
15693 % U+003E GREATER-THAN SIGN; greater
15694 \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
15695 % U+005C REVERSE SOLIDUS; backslash
15696 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
15697 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
15698 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}

\135: U+005D RIGHT SQUARE BRACKET; bracketright
15699 % U+005E CIRCUMFLEX ACCENT; asciicircum
15700 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
15701 % U+005F LOW LINE; underscore
15702 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
15703 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
15704 % U+0060 GRAVE ACCENT; grave
15705 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060

\141: U+0061 LATIN SMALL LETTER A; a

...
\150: U+0068 LATIN SMALL LETTER H; h
15706 % U+0069 LATIN SMALL LETTER I; i
15707 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069

\152: U+006A LATIN SMALL LETTER J; j

...
\172: U+007A LATIN SMALL LETTER Z; z
15708 % U+007B LEFT CURLY BRACKET; braceleft
15709 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
15710 % U+007C VERTICAL LINE; *bar, verticalbar
15711 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
15712 % U+007D RIGHT CURLY BRACKET; braceright
15713 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
15714 % U+007E TILDE; asciitilde
15715 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E

Slot \177 (0x7F) is undefined in PDFDocEncoding.

15716 % U+2022 BULLET; bullet
 15717 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15718 % U+2020 DAGGER; dagger
 15719 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15720 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 15721 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15722 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15723 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15724 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15725 % U+2014 EM DASH; emdash
 15726 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15727 % U+2013 EN DASH; endash
 15728 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15729 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15730 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15731 % U+2044 FRACTION SLASH; fraction
 15732 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15733 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15734 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 15735 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 ingright
 15736 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
 15737 % U+2212 MINUS SIGN; minus
 15738 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15739 % U+2030 PER MILLE SIGN; perthousand
 15740 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15741 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15742 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15743 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15744 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15745 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15746 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15747 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15748 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15749 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15750 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15751 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15752 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15753 % U+2122 TRADE MARK SIGN; trademark
 15754 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15755 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15756 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15757 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15758 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15759 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15760 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15761 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15762 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15763 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15764 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15765 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15766 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
 15767 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15768 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15769 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15770 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi

15771 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15772 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15773 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15774 % U+0153 LATIN SMALL LIGATURE OE; oe
 15775 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15776 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15777 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15778 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15779 \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.
 15780 % U+20AC EURO SIGN; *Euro, euro
 15781 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15782 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15783 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15784 % U+00A2 CENT SIGN; cent
 15785 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15786 % U+00A3 POUND SIGN; sterling
 15787 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15788 % U+00A4 CURRENCY SIGN; currency
 15789 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15790 % U+00A5 YEN SIGN; yen
 15791 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15792 % U+00A6 BROKEN BAR; brokenbar
 15793 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15794 % U+00A7 SECTION SIGN; section
 15795 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15796 % U+00A8 DIAERESIS; dieresis
 15797 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15798 % U+00A9 COPYRIGHT SIGN; copyright
 15799 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15800 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15801 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15802 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15803 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15804 % U+00AC NOT SIGN; logicalnot
 15805 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15806 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15807 % U+00AE REGISTERED SIGN; registered
 15808 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15809 % U+00AF MACRON; *macron, overscore
 15810 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 15811 % U+00B0 DEGREE SIGN; degree
 15812 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 15813 % U+00B1 PLUS-MINUS SIGN; plusminus
 15814 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 15815 % U+00B2 SUPERSCRIPT TWO; twosuperior
 15816 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
 15817 % U+00B3 SUPERSCRIPT THREE; threesuperior
 15818 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
 15819 % U+00B4 ACUTE ACCENT; acute
 15820 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 15821 % U+00B5 MICRO SIGN; mu, mu1
 15822 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 15823 % U+00B6 PILCROW SIGN; paragraph

15824 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15825 % U+00B7 MIDDLE DOT; middot, *periodcentered
15826 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15827 % U+00B8 CEDILLA; cedilla
15828 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15829 % U+00B9 SUPERSCRIPT ONE; onesuperior
15830 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15831 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15832 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15833 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15834 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15835 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15836 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15837 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15838 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15839 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15840 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15841 % U+00BF INVERTED QUESTION MARK; questiondown
15842 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15843 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15844 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15845 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15846 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15847 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15848 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15849 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15850 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15851 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15852 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15853 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15854 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15855 % U+00C6 LATIN CAPITAL LETTER AE; AE
15856 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15857 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15858 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15859 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15860 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15861 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15862 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15863 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15864 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15865 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15866 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15867 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15868 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15869 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15870 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15871 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15872 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15873 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15874 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15875 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15876 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15877 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15878 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15879 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1

15880 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15881 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15882 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15883 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15884 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15885 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15886 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15887 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15888 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15889 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15890 % U+00D7 MULTIPLICATION SIGN; multiply
15891 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15892 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15893 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15894 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15895 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15896 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15897 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15898 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15899 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15900 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15901 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15902 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15903 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15904 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15905 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15906 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15907 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15908 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15909 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15910 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15911 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15912 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15913 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15914 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
15915 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15916 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15917 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15918 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15919 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15920 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15921 % U+00E6 LATIN SMALL LETTER AE; ae
15922 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15923 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15924 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15925 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15926 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15927 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15928 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15929 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15930 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15931 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15932 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15933 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15934 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15935 \DeclareTextCompositeCommand{\~}{PD1}{i}{\354}% U+00EC
15936 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute

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15937 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15938 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15939 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15940 \DeclareTextCompositeCommand{\~}{PD1}{i}{\356}% U+00EE
15941 \DeclareTextCompositeCommand{\~}{PD1}{i}{\356}% U+00EE
15942 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15943 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
15944 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
15945 % U+00F0 LATIN SMALL LETTER ETH; eth
15946 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15947 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15948 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15949 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15950 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15951 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15952 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15953 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15954 \DeclareTextCompositeCommand{\~}{PD1}{o}{\364}% U+00F4
15955 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otile
15956 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15957 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15958 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
15959 % U+00F7 DIVISION SIGN; divide
15960 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15961 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15962 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15963 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15964 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15965 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15966 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15967 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15968 \DeclareTextCompositeCommand{\~}{PD1}{u}{\373}% U+00FB
15969 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15970 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
15971 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15972 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15973 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15974 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15975 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15976 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15977 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
15978 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

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Glyphs that consist of several characters.

```

15979 \DeclareTextCommand{\SS}{PD1}{SS}%
15980 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

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Aliases (german.sty)

```

15981 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15982 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15983 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15984 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15985 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15986 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15987 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15988 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

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15989 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%

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15990 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15991 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15992 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15993 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15994 \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).

```

15995 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15996 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15997 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15998 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15999 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
16000 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
16001 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
16002 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
16003 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
16004 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
16005 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
16006 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
16007 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
16008 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
16009 </pd1enc>

```

51.2 PU encoding

```

16010 <*puenc>
16011 \DeclareFontEncoding{PU}{}{}

```

51.2.1 NFSS2 accents

```

16012 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
16013 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
16014 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
16015 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
16016 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
16017 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
16018 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
16019 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
16020 % U+0304 COMBINING MACRON; macroncmb
16021 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
16022 % U+0306 COMBINING BREVE; brevecmb
16023 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
16024 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
16025 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
16026 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
16027 % U+0308 COMBINING DIAERESIS; dieresiscmb
16028 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
16029 % U+030A COMBINING RING ABOVE; ringcmb
16030 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
16031 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
16032 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
16033 % U+030C COMBINING CARON; caroncmb
16034 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
16035 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
16036 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
16037 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
16038 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb

```

16039 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
 16040 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 16041 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 16042 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 16043 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
 laut (tipa)
 16044 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
 16045 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
 16046 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
 16047 % U+0327 COMBINING CEDILLA; cedillacmb
 16048 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 16049 % U+0328 COMBINING OGONEK; ogonekcmb
 16050 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 16051 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
 16052 % \textsubcircum (tipa)
 16053 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
 16054 % U+032E COMBINING BREVE BELOW; brevebelowcmb
 16055 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
 16056 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
 16057 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
 16058 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 16059 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 16060 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 16061 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 16062 % U+20DD COMBINING ENCLOSING CIRCLE
 16063 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

16064 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
 16065 \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.

16066 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
 16067 \DeclareTextCompositeCommand{\' }{PU}{\@empty}{\textacute}%
 16068 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}%
 16069 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
 16070 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
 16071 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
 16072 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
 16073 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
 16074 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
 16075 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
 16076 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
 16077 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
 16078 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
 16079 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
 16080 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{ \83\021\}}% U+0311
 16081 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{ \83\044\}}% U+0324
 16082 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
 16083 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
 low}%
 16084 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{ \83\056\}}% U+032E
 16085 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%
 16086 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
 16087 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
 16088 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
 16089 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%

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16090 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
16091 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16092 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16093 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
16094 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
16095 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%
16096 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
16097 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
16098 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
16099 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
16100 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
16101 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
16102 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
16103 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
16104 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
16105 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
16106 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
16107 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
16108 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
16109 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\texttriglow}%
16110 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
16111 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
16112 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
16113 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
16114 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
16115 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
16116 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
16117 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
16118 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16119 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

16120 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16121 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16122 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16123 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
16124 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16125 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16126 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\">{#1}}%
16127 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16128 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16129 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16130 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16131 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16132 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}%
16133 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16134 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

16135 % U+0009 (CHARACTER TABULATION)
16136 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16137 % U+000A (LINE FEED)
16138 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16139 % U+000D (CARRIAGE RETURN)
16140 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

```

\80\040: U+0020 SPACE; space, spacehackarabic

\80\041: U+0021 EXCLAMATION MARK; exclam
 16141 % U+0022 QUOTATION MARK; quotedbl
 16142 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
 16143 % U+0023 NUMBER SIGN; numbersign
 16144 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 16145 % U+0024 DOLLAR SIGN; dollar
 16146 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 16147 %* \textdollar -> \mathdollar
 16148 %* \textdollar -> \EyesDollar (marvosym)
 16149 % U+0025 PERCENT SIGN; percent
 16150 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 16151 % U+0026 AMPERSAND; ampersand
 16152 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 16153 %* \textampersand -> \binampersand (stmaryrd)
 16154 %* \textampersand -> \with (cml)
 16155 % U+0027 APOSTROPHE; quotesingle
 16156 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 16157 % U+0028 LEFT PARENTHESIS; parenleft
 16158 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 16159 % U+0029 RIGHT PARENTHESIS; parenright
 16160 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 16161 % U+002A ASTERISK; asterisk; (?)
 16162 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
 16163 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
 16164 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
 16165 % U+002C COMMA; comma; \MVComma (marvosym)
 16166 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
 16167 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
 16168 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
 16169 % U+002E FULL STOP; period; \MVPeriod (marvosym)
 16170 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
 16171 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
 16172 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
 16173 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
 16174 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
 16175 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
 16176 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 16177 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
 16178 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 16179 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 16180 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 16181 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
 16182 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
 16183 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
 16184 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
 16185 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
 16186 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 16187 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 16188 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 16189 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 16190 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 16191 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 16192 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 16193 % U+003C LESS-THAN SIGN; less
 16194 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

$\backslash 80\backslash 075$: U+003D EQUALS SIGN; equal
 16195 % U+003E GREATER-THAN SIGN; greater
 16196 $\backslash \text{DeclareTextCommand}\{\backslash \text{textgreater}\}\{\text{PU}\}\{>\}\%$ $\backslash 80\backslash 076$ U+003E
 $\backslash 80\backslash 077$: U+003F QUESTION MARK; question
 16197 % U+0040 COMMERCIAL AT; at; $\backslash \text{MVAt}$ (marvosym)
 16198 $\backslash \text{DeclareTextCommand}\{\backslash \text{textMVAt}\}\{\text{PU}\}\{\backslash 80\backslash 100\}\%$ * U+0040
 $\backslash 80\backslash 101$: U+0041 LATIN CAPITAL LETTER A; A
 ...
 $\backslash 80\backslash 132$: U+005A LATIN CAPITAL LETTER Z; Z
 $\backslash 80\backslash 133$: U+005B LEFT SQUARE BRACKET; bracketleft
 16199 % U+005C REVERSE SOLIDUS; backslash
 16200 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbackslash}\}\{\text{PU}\}\{\backslash 80\backslash 134\}\%$ U+005C
 $\backslash 80\backslash 135$: U+005D RIGHT SQUARE BRACKET; bracketright
 16201 % U+005E CIRCUMFLEX ACCENT; asciicircum
 16202 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciicircum}\}\{\text{PU}\}\{\backslash 80\backslash 136\}\%$ U+005E
 16203 % U+005F LOW LINE; underscore
 16204 $\backslash \text{DeclareTextCommand}\{\backslash \text{textunderscore}\}\{\text{PU}\}\{\backslash 80\backslash 137\}\%$ U+005F
 16205 %* $\backslash \text{textunderscore} \rightarrow \backslash \text{mathunderscore}$ (LaTeX)
 16206 % U+0060 GRAVE ACCENT; grave
 16207 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciigrave}\}\{\text{PU}\}\{\backslash 80\backslash 140\}\%$ U+0060
 $\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
 ...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
 16208 % U+0069 LATIN SMALL LETTER I; i
 16209 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\backslash i\}\{\text{PU}\}\{\backslash i\}\%$ $\backslash 80\backslash 151$ U+0069
 16210 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\backslash i\}\{\text{PU}\}\{\backslash i\}\%$ $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
 ...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
 16211 % U+007B LEFT CURLY BRACKET; braceleft
 16212 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceleft}\}\{\text{PU}\}\{\backslash 80\backslash 173\}\%$ U+007B
 16213 % U+007C VERTICAL LINE; *bar, verticalbar
 16214 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbar}\}\{\text{PU}\}\{\backslash |\}\%$ $\backslash 80\backslash 174$ U+007C
 16215 %* $\backslash \text{textbar} \rightarrow \backslash \text{textvtrline}$ (tipa)
 16216 % U+007D RIGHT CURLY BRACKET; braceright
 16217 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceright}\}\{\text{PU}\}\{\backslash 80\backslash 175\}\%$ U+007D
 16218 % U+007E TILDE; asciitilde
 16219 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciitilde}\}\{\text{PU}\}\{\backslash 80\backslash 176\}\%$ U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 16220 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 16221 $\backslash \text{DeclareTextCommand}\{\backslash \text{textexclamdown}\}\{\text{PU}\}\{\backslash 80\backslash 241\}\%$ U+00A1
 16222 % U+00A2 CENT SIGN; cent
 16223 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcent}\}\{\text{PU}\}\{\backslash 80\backslash 242\}\%$ U+00A2
 16224 % U+00A3 POUND SIGN; sterling
 16225 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsterling}\}\{\text{PU}\}\{\backslash 80\backslash 243\}\%$ U+00A3
 16226 %* $\backslash \text{textsterling} \rightarrow \backslash \text{mathsterling}$ (LaTeX)
 16227 %* $\backslash \text{textsterling} \rightarrow \backslash \text{pounds}$ (LaTeX)
 16228 % U+00A4 CURRENCY SIGN; currency
 16229 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcurrency}\}\{\text{PU}\}\{\backslash 80\backslash 244\}\%$ U+00A4
 16230 % U+00A5 YEN SIGN; yen

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16231 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
16232 % U+00A6 BROKEN BAR; brokenbar
16233 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
16234 %* \textbrokenbar -> \brokenvert (wasysym)
16235 % U+00A7 SECTION SIGN; section
16236 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
16237 %* \textsection -> \mathsection (LaTeX)
16238 %* \textsection -> \S (LaTeX)
16239 % U+00A8 DIAERESIS; dieresis
16240 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
16241 % U+00A9 COPYRIGHT SIGN; copyright
16242 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
16243 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
16244 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
16245 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
    motleft
16246 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
16247 % U+00AC NOT SIGN; logicalnot
16248 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
16249 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
16250 % U+00AE REGISTERED SIGN; registered
16251 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
16252 % U+00AF MACRON; *macron, overscore
16253 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
16254 % U+00B0 DEGREE SIGN; degree
16255 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
16256 % U+00B1 PLUS-MINUS SIGN; plusminus
16257 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
16258 % U+00B2 SUPERSCRIPT TWO; twosuperior
16259 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
16260 % U+00B3 SUPERSCRIPT THREE; threesuperior
16261 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
16262 % U+00B4 ACUTE ACCENT; acute
16263 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
16264 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
16265 % U+00B5 MICRO SIGN; mu, mul
16266 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
16267 % U+00B6 PILCROW SIGN; paragraph
16268 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
16269 %* \textparagraph -> \mathparagraph (LaTeX)
16270 % U+00B7 MIDDLE DOT; middot, *periodcentered
16271 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
16272 %* \textperiodcentered -> \MultiplicationDot (marvosym)
16273 %* \textperiodcentered -> \Squaredot (marvosym)
16274 % U+00B8 CEDILLA; cedilla
16275 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
16276 % U+00B9 SUPERSCRIPT ONE; onesuperior
16277 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
16278 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
16279 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
16280 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
    motright
16281 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
16282 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
16283 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
16284 % U+00BD VULGAR FRACTION ONE HALF; onehalf

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16285 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
16286 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
16287 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
16288 % U+00BF INVERTED QUESTION MARK; questiondown
16289 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
16290 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
16291 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
16292 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
16293 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
16294 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
16295 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
16296 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
16297 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
16298 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
16299 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
16300 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
16301 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
16302 % U+00C6 LATIN CAPITAL LETTER AE; AE
16303 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
16304 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
16305 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
16306 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
16307 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
16308 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
16309 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
16310 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
16311 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
16312 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
16313 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
16314 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
16315 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
16316 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
16317 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
16318 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
16319 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
16320 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16321 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
16322 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16323 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16324 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16325 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
16326 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16327 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
16328 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16329 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
16330 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
16331 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
16332 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16333 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
16334 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16335 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
16336 % U+00D7 MULTIPLICATION SIGN; multiply
16337 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16338 %* \textmultiply -> \vartimes (stmaryrd)
16339 %* \textmultiply -> \MVMultiplication (marvosym)
16340 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16341 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8

16342 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16343 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
16344 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16345 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
16346 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16347 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
16348 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16349 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
16350 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16351 \DeclareTextCompositeCommand{\'Y}{PU}{Y}{\80\335}% U+00DD
16352 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16353 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16354 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16355 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16356 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16357 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16358 \DeclareTextCompositeCommand{\`a}{PU}{a}{\80\340}% U+00E0
16359 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16360 \DeclareTextCompositeCommand{\'a}{PU}{a}{\80\341}% U+00E1
16361 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16362 \DeclareTextCompositeCommand{\^a}{PU}{a}{\80\342}% U+00E2
16363 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16364 \DeclareTextCompositeCommand{\~a}{PU}{a}{\80\343}% U+00E3
16365 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16366 \DeclareTextCompositeCommand{\"a}{PU}{a}{\80\344}% U+00E4
16367 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16368 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16369 % U+00E6 LATIN SMALL LETTER AE; ae
16370 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16371 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16372 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16373 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16374 \DeclareTextCompositeCommand{\`e}{PU}{e}{\80\350}% U+00E8
16375 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16376 \DeclareTextCompositeCommand{\'e}{PU}{e}{\80\351}% U+00E9
16377 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16378 \DeclareTextCompositeCommand{\^e}{PU}{e}{\80\352}% U+00EA
16379 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16380 \DeclareTextCompositeCommand{\"e}{PU}{e}{\80\353}% U+00EB
16381 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16382 \DeclareTextCompositeCommand{\`i}{PU}{i}{\80\354}% U+00EC
16383 \DeclareTextCompositeCommand{\~i}{PU}{i}{\80\354}% U+00EC
16384 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16385 \DeclareTextCompositeCommand{\'i}{PU}{i}{\80\355}% U+00ED
16386 \DeclareTextCompositeCommand{\^i}{PU}{i}{\80\355}% U+00ED
16387 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16388 \DeclareTextCompositeCommand{\^i}{PU}{i}{\80\356}% U+00EE
16389 \DeclareTextCompositeCommand{\~i}{PU}{i}{\80\356}% U+00EE
16390 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16391 \DeclareTextCompositeCommand{\"i}{PU}{i}{\80\357}% U+00EF
16392 \DeclareTextCompositeCommand{\"i}{PU}{i}{\80\357}% U+00EF
16393 % U+00F0 LATIN SMALL LETTER ETH; eth
16394 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16395 %* \dh -> \eth (wsuipa, phonetic)
16396 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16397 \DeclareTextCompositeCommand{\~n}{PU}{n}{\80\361}% U+00F1
16398 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve

16399 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 16400 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 16401 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 16402 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 16403 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 16404 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 16405 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 16406 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 16407 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 16408 % U+00F7 DIVISION SIGN; divide
 16409 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 16410 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 16411 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 16412 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 16413 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 16414 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 16415 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 16416 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 16417 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 16418 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 16419 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 16420 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 16421 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 16422 % U+00FE LATIN SMALL LETTER THORN; thorn;
 16423 % \th, \thorn (wasysym), \textthorn (tipa)
 16424 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 16425 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 16426 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 16427 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

51.2.4 Latin Extended-A: U+0080 to U+017F

16428 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 16429 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 16430 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 16431 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 16432 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 16433 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 16434 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 16435 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 16436 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 16437 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 16438 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 16439 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 16440 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 16441 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 16442 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 16443 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 16444 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 16445 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 16446 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 16447 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 16448 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
 cent
 16449 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 16450 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 16451 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B

16452 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16453 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16454 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16455 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16456 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16457 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16458 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16459 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16460 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16461 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16462 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16463 % \textcrd (tipa)
16464 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16465 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16466 %* \textcrd -> \crossd (wsuipa)
16467 % An alternate glyph with the stroke through the bowl:
16468 %* \textcrd -> \textbard (tipa)
16469 %* \textcrd -> \bard (wsuipa)
16470 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16471 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16472 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16473 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16474 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16475 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16476 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16477 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16478 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16479 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16480 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16481 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16482 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16483 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16484 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16485 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16486 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16487 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16488 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16489 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16490 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16491 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16492 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16493 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16494 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16495 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16496 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16497 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16498 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
16499 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16500 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16501 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16502 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
16503 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16504 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16505 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16506 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex

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16507 \DeclareTextCompositeCommand{\~}{PU}{H}{\81\044}% U+0124
16508 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16509 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16510 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16511 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16512 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16513 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16514 %* \texthbar -> \textcrh (tipa)
16515 %* \texthbar -> \crossh (wsuipa)
16516 %* \texthbar -> \planck (phonetic)
16517 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16518 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16519 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16520 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16521 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
16522 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16523 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16524 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16525 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16526 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
16527 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16528 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16529 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16530 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16531 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
16532 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16533 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16534 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16535 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16536 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16537 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16538 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16539 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16540 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16541 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16542 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16543 % U+0133 LATIN SMALL LIGATURE IJ; ij
16544 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16545 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16546 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16547 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16548 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16549 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135
16550 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16551 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16552 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16553 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has choosen `\textkra`.

```

16554 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16555 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16556 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16557 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16558 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16559 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A

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16560 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
cent

16561 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B

16562 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent

16563 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C

16564 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron

16565 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D

16566 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron

16567 \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.

16568 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
cent

16569 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F

16570 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent

16571 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140

16572 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash

16573 \DeclareTextCompositeCommand{\L}{PU}{\81\101}% U+0141

16574 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash

16575 \DeclareTextCompositeCommand{\l}{PU}{\81\102}% U+0142

16576 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute

16577 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143

16578 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute

16579 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144

16580 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
cent

16581 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145

16582 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent

16583 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146

16584 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron

16585 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147

16586 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron

16587 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148

16588 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn

16589 \DeclareTextCompositeCommand{\textnapostrophe}{PU}{\81\111}% U+0149

16590 % U+014A LATIN CAPITAL LETTER ENG; Eng

16591 \DeclareTextCompositeCommand{\NG}{PU}{\81\112}% U+014A

16592 % U+014B LATIN SMALL LETTER ENG; eng

16593 \DeclareTextCompositeCommand{\ng}{PU}{\81\113}% U+014B

16594 %* \ng -> \eng (wsuiipa)

16595 %* \ng -> \engma (phonetic)

16596 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron

16597 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C

16598 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron

16599 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D

16600 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve

16601 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E

16602 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve

16603 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F

16604 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut

16605 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150

16606 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut

16607 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151

16608 % U+0152 LATIN CAPITAL LIGATURE OE; OE
16609 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
16610 % U+0153 LATIN SMALL LIGATURE OE; oe
16611 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
16612 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
16613 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
16614 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
16615 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
16616 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
cent
16617 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
16618 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
16619 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
16620 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
16621 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
16622 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
16623 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
16624 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
16625 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
16626 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
16627 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
16628 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
16629 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
16630 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
16631 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
16632 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
16633 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
16634 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
16635 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
16636 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
16637 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
16638 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
16639 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
16640 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
cent
16641 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16642 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16643 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16644 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16645 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16646 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16647 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16648 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16649 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16650 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16651 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16652 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16653 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16654 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16655 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16656 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16657 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16658 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16659 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
16660 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16661 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
16662 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve

16663 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 16664 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 16665 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 16666 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 16667 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 16668 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
 cute, Uhungarumlaut
 16669 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 16670 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
 cute, uhungarumlaut
 16671 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 16672 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 16673 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 16674 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 16675 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 16676 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 16677 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 16678 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 16679 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 16680 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 16681 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 16682 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16683 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 16684 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16685 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16686 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16687 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16688 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16689 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 16690 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16691 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 16692 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16693 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 16694 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16695 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16696 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16697 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16698 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16699 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16700 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16701 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16702 %* \textcrb -> \crossb (wsuipa)
 16703 % An alternate glyph with the stroke through the bowl:
 16704 %* \textcrb -> \textbarb (tipa)
 16705 %* \textcrb -> \barb (wsuipa)
 16706 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (pho-
 netic)
 16707 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
 16708 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 16709 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 16710 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-
 netic)
 16711 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A
 16712 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
 16713 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E

16714 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16715 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16716 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16717 %* \textflorin -> \Florin (marvosym)
16718 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16719 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16720 %* \texthvlig -> \hv (wsuipa)
16721 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (phonetic)
16722 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
16723 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16724 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16725 %* \texthtk -> \hausak (phonetic)
16726 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16727 % \textbarl (tipa), \barl (wsuipa)
16728 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16729 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16730 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16731 % \textclambda (tipa)
16732 \DeclareTextCommand{\textclambda}{PU}{\81\233}% U+019B
16733 %* \textclambda -> \crossnilambda (wsuipa)
16734 %* \textclambda -> \barlambd (phonetic)
16735 %* \textclambda -> \lambdabar (txfonts/pxfonts)
16736 %* \textclambda -> \lambdaslash (txfonts/pxfonts)
16737 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegrightlong;
16738 % \textnrleg (tipx)
16739 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16740 %* \textPUnrleg -> \textnrleg (tipx)
16741 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16742 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16743 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16744 % \textlhookt (tipa)
16745 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16746 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16747 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16748 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16749 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16750 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16751 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16752 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16753 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16754 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16755 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16756 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16757 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16758 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickdental;
16759 % \textpipe (tipa)
16760 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16761 %* \textpipe -> \textpipevar (tipx)
16762 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16763 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16764 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16765 %* \textdoublepipe -> \textdoublepipevar (tipx)
16766 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOUBLE BAR;

16767 % clickalveolar; \textdoublebarpipe (tipa)
16768 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16769 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16770 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16771 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16772 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
16773 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16774 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16775 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16776 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
16777 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16778 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16779 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16780 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16781 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
16782 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16783 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16784 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16785 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
16786 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16787 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16788 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16789 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16790 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16791 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16792 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16793 %* \textgslash -> \textcrg (tipa)
16794 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16795 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16796 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
16797 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16798 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16799 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16800 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
16801 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16802 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16803 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16804 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16805 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16806 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16807 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16808 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16809 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16810 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16811 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16812 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16813 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16814 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16815 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16816 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16817 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16818 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16819 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16820 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16821 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16822 % *Oslashacute, Ostrokeacut
16823 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE

16824 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
 16825 % *oslashacute, ostrokeacute
 16826 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
 16827 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 16828 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 16829 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 16830 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 16831 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 16832 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 16833 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 16834 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 16835 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
 edbreve
 16836 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
 16837 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
 breve
 16838 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
 16839 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 16840 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 16841 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 16842 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 16843 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 16844 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
 breve
 16845 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
 16846 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
 breve
 16847 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
 16848 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
 16849 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 16850 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 16851 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
 16852 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 16853 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
 edbreve
 16854 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
 16855 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinvert-
 breve
 16856 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
 16857 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 16858 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 16859 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 16860 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 16861 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 16862 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 16863 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 16864 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 16865 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
 edbreve
 16866 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
 16867 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinvert-
 breve
 16868 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 16869 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16870 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16871 % U+021F LATIN SMALL LETTER H WITH CARON
 16872 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F

16873 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16874 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16875 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16876 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16877 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16878 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16879 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16880 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16881 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16882 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16883 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16884 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16885 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16886 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16887 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16888 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16889 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16890 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16891 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16892 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16893 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16894 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16895 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16896 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16897 % U+0237 LATIN SMALL LETTER DOTLESS J
 16898 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16899 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16900 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16901 %* \textPUdblig -> \textdblig (tipx)
 16902 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16903 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16904 %* \textPUqplig -> \textqplig (tipx)
 16905 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16906 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16907 %* \textslashc -> \textcentoldstyle (textcomp)
 16908 % With bar instead of stroke:
 16909 %* \textslashc -> \textbarc (tipa)

51.2.6 IPA Extensions: U+0250 to U+02AF

16910 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16911 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16912 %* \textturna -> \inva (wasysym)
 16913 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16914 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16915 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16916 %* \textscripta -> \vara (phonetic)
 16917 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16918 % \textturnscripta (tipa)
 16919 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16920 %* \textturnscripta -> \invscripta (wsuipa)
 16921 %* \textturnscripta -> \rotvara (phonetic)
 16922 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16923 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16924 %* \texthtb -> \hookb (wsuipa)
 16925 %* \texthtb -> \hausab (phonetic)
 16926 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16927 % \textopeno (tipa), \openo (wasysym)

16928 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
16929 %* \textopeno -> \varopeno (phonetic)
16930 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
16931 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
16932 %* \textctc -> \curlyc (wsuipa)
16933 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
16934 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
16935 %* \textrtaild -> \taild (wsuipa)
16936 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
16937 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
16938 %* \texthtd -> \hookd (wsuipa)
16939 %* \texthtd -> \hausad (phonetic)
16940 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
16941 % \textreve (tipa), \reve (wsuipa)
16942 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
16943 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
16944 % \textschwa (tipa), \schwa (wsuipa, phonetic)
16945 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
16946 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16947 % \textrhookswa (tipa)
16948 \DeclareTextCommand{\textrhookswa}{PU}{\82\132}% U+025A
16949 %* \textrhookswa -> \er (wsuipa)
16950 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
SILON; eopen;
16951 % \niepsilon (wsuipa)
16952 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
16953 %* \textniepsilon -> \epsi (phonetic)
16954 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
16955 % \textrevepsilon (tipa), \revepsilon (wsuipa)
16956 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
16957 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
reversedhook;
16958 % \textrhookrevepsilon (tipa)
16959 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D
16960 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
16961 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
versedclosed;
16962 % \textcloserevepsilon (tipa)
16963 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
16964 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
16965 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
lessstroke;
16966 % \textbardotlessj (tipa)
16967 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
16968 %* \textbardotlessj -> \barj (phonetic)
16969 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
16970 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
16971 %* \texthtg -> \hookg (wsuipa)
16972 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
16973 % \textscriptg (tipa), \scriptg (wsuipa)
16974 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
16975 %* \textscriptg -> \varg (phonetic)
16976 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
16977 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16978 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
16979 % \ipagamma (wsuipa), \vod (phonetic)
16980 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263

16981 %* \textipagamma -> \vod (pnonetic)
 16982 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
 16983 % \babygamma (wsuipa)
 16984 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
 16985 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16986 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16987 %* \textturnh -> \invh (wsuipa)
 16988 %* \textturnh -> \udesc (phonetic)
 16989 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16990 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16991 %* \texthth -> \hookh (wsuipa)
 16992 %* \texthth -> \voicedh (phonetic)
 16993 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \texththeng (tipa)
 16994 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16995 %* \texththeng -> \hookheng (wsuipa)
 16996 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16997 % \textbari (tipa), \bari (wsuipa)
 16998 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
 16999 %* \textbari -> \ibar (phonetic)
 17000 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
 17001 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
 17002 %* \textniiota -> \vari (phonetic)
 17003 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
 17004 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
 17005 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 17006 % \textltilde (tipa)
 17007 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 17008 %* \textltilde -> \tildel (wsuipa)
 17009 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 17010 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 17011 %* \textbeltl -> \latfric (wsuipa)
 17012 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 17013 % lhookretroflex; \textrtaill (tipa)
 17014 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
 17015 %* \textrtaill -> \taill (wsuipa)
 17016 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
 17017 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
 17018 %* \textlyoghlig -> \lz (wsuipa)
 17019 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
 17020 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
 17021 %* \textturnm -> \invm (wsuipa)
 17022 %* \textturnm -> \rotm (phonetic)
 17023 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlonglegturned;
 17024 % \textturnmrleg (tipa)
 17025 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
 17026 %* \textturnmrleg -> \legm (wsuipa)
 17027 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
 17028 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
 17029 %* \textltailm -> \labdentainas (wsuipa)
 17030 %* \textltailm -> \emgma (phonetic)
 17031 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textltailn (tipa)
 17032 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
 17033 %* \textltailn -> \nj (wsuipa)
 17034 %* \textltailn -> \enya (phonetic)

17035 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
17036 % nhookretroflex; \textrtailn (tipa)
17037 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
17038 %* \textrtailn -> \tailn (wsuipa)
17039 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
17040 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
17041 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
17042 % LATIN CAPITAL LETTER BARRED O; obarred;
17043 % \textbaro (tipa), \baro (wsuipa)
17044 % But \baro from stmaryrd is different!
17045 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
17046 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscœlig (tipa)
17047 \DeclareTextCommand{\textscœlig}{PU}{\82\166}% U+0276
17048 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatininclosed;
17049 % \textcloseomega (tipa)
17050 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
17051 %* \textcloseomega -> \closedniomega (wsuipa)
17052 %* \textcloseomega -> \varomega (phonetic)
17053 % U+0278 LATIN SMALL LETTER PHI; philatin; \nipher (wsuipa)
17054 \DeclareTextCommand{\textnipher}{PU}{\82\170}%* U+0278
17055 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
17056 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
17057 %* \textturnr -> \invr (wsuipa)
17058 %* \textturnr -> \rotr (phonetic)
17059 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
17060 % rlonglegturned; \textturnlongleg (tipa)
17061 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
17062 %* \textturnlongleg -> \invleg (wsuipa)
17063 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhoorturned;
17064 % \textturnrrtail (tipa)
17065 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
17066 %* \textturnrrtail -> \tailinvr (wsuipa)
17067 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlongleg (tipa)
17068 \DeclareTextCommand{\textlongleg}{PU}{\82\174}%* U+027C
17069 %* \textlongleg -> \leg (wsuipa)
17070 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoortail; \textrtailr (tipa)
17071 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
17072 %* \textrtailr -> \tailr (wsuipa)
17073 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
17074 % \textfishhook (tipa)
17075 \DeclareTextCommand{\textfishhook}{PU}{\82\176}% U+027E
17076 %* \textfishhook -> \flapr (wsuipa)
17077 %* \textfishhook -> \flap (phonetic)
17078 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
17079 % \textlhtlongi (tipa)
17080 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17081 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17082 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17083 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17084 % \textinvscr (tipa), \invscr (wsuipa)
17085 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
17086 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \texttrails (tipa)
17087 \DeclareTextCommand{\texttrails}{PU}{\82\202}% U+0282
17088 %* \texttrails -> \tails (wsuipa)
17089 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)

17090 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
17091 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17092 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17093 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17094 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatereversed;
17095 % \textvibyi (tipa)
17096 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17097 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17098 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17099 %* \textctesh -> \curlyesh (wsuipa)
17100 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17101 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17102 %* \textturnt -> \clickt (wsuipa)
17103 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; tetroflexhook;
17104 % \textrtailt (tipa)
17105 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
17106 %* \textrtailt -> \tailt (wsuipa)
17107 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17108 % \textbaru (tipa), \baru (wsuipa)
17109 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
17110 %* \textbaru -> \ubar (phonetic)
17111 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17112 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
17113 %* \textniupsilon -> \rotOmega (phonetic)
17114 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
17115 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17116 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
17117 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17118 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
17119 %* \textturnv -> \invv (wsuipa)
17120 %* \textturnv -> \pwedge (phonetic)
17121 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
17122 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
17123 %* \textturnw -> \invw (wsuipa)
17124 %* \textturnw -> \rotw (phonetic)
17125 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
17126 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
17127 %* \textturny -> \invy (wsuipa)
17128 %* \textturny -> \roty (phonetic)
17129 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17130 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
17131 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflexhook;
17132 % \textrtailz (tipa)
17133 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
17134 %* \textrtailz -> \tailz (wsuipa)
17135 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
17136 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17137 %* \textctz -> \curlyz (wsuipa)
17138 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
17139 % \textyogh (tipa), \yogh (wsuipa)
17140 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17141 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;

17142 % ezhcurl; \textctyogh (tipa)
17143 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17144 %* \textctyogh -> \curlyyogh (wsuipa)
17145 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
17146 % \textglotstop (tipa), \glotstop (wsuipa)
17147 \DeclareTextCommand{\textglotstop}{PU}{\82\224}% U+0294
17148 %* \textglotstop -> \ejective (wsuipa)
17149 %* \textglotstop -> \glottal (phonetic)
17150 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17151 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
17152 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17153 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}% U+0295
17154 %* \textrevglotstop -> \reveject (wsuipa)
17155 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
17156 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17157 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}% U+0296
17158 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
17159 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17160 %* \textstretchc -> \clickc (wsuipa)
17161 %* \textstretchc -> \textstretchcvar (tipx)
17162 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
17163 % \textbullseye (tipa)
17164 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17165 %* \textbullseye -> \clickb (wsuipa)
17166 %* \textbullseye -> \textObullseye (tipx)
17167 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17168 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17169 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17170 % \textclosepsilon (tipa)
17171 \DeclareTextCommand{\textclosepsilon}{PU}{\82\232}% U+029A
17172 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17173 % \texthtscg (tipa)
17174 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17175 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
17176 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
17177 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossed-
tail; \textcdj (tipa)
17178 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
17179 %* \textctj -> \textctjvar (tipx)
17180 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
17181 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
17182 %* \textturnk -> \textturnsck (tipx)
17183 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
17184 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
17185 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
17186 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
17187 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
17188 % \textbarglotstop (tipa)
17189 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
17190 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
17191 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
17192 % \textbarrevglotstop (tipa)
17193 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
17194 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
17195 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3

17196 %* \textdzlig -> \dz (wsupipa)
 17197 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyoghlig (tipa)
 17198 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 17199 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 17200 % \textdctzlig (tipa)
 17201 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 17202 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 17203 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 17204 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
 17205 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
 17206 %* \texttshlig -> \tsh (wsuipa)
 17207 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 17208 % \texttctclig (tipa)
 17209 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 17210 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 17211 % \textlhtlongy (tipa)
 17212 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 17213 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 17214 % \textvibyy (tipa)
 17215 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

17216 % U+02BD MODIFIER LETTER REVERSED COMMA;
 17217 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 17218 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 17219 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 17220 % \textraiseglotstop (tipa)
 17221 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 17222 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 17223 % \textlptr (tipa)
 17224 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 17225 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 17226 % \textrptr (tipa)
 17227 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 17228 % U+02C7 CARON; caron
 17229 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 17230 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 17231 % \textprimstress (tipa)
 17232 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 17233 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 17234 % \textsecstress (tipa)
 17235 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 17236 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 17237 % \textlengthmark (tipa)
 17238 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17239 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 17240 % \texthalflength (tipa)
 17241 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17242 % U+02D8 BREVE; breve
 17243 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17244 % U+02D9 DOT ABOVE; dotaccent
 17245 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17246 % U+02DA RING ABOVE; ring
 17247 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17248 % U+02DB OGONEK; ogonek

17249 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17250 % U+02DC SMALL TILDE; ilde, *tilde
 17251 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17252 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17253 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17254 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17255 % U+02F3 MODIFIER LETTER LOW RING
 17256 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17257 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17258 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17259 % U+02F7 MODIFIER LETTER LOW TILDE
 17260 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 17261 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17262 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17263 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17264 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

51.2.8 Combining Diacritical Marks: U+0300 to U+036F

17265 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 17266 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17267 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 17268 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17269 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 17270 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17271 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 17272 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17273 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blecmb
 17274 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

51.2.9 Greek and Coptic: U+0370 to U+03FF

17275 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17276 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17277 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 17278 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 17279 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 17280 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 17281 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 17282 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 17283 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 17284 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 17285 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 17286 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 17287 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
 crontonos
 17288 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 17289 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 17290 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 17291 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 17292 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 17293 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
 17294 % iodadiesistonos
 17295 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
 17296 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 17297 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 17298 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 17299 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392

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17300 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
17301 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
17302 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
17303 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
17304 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
17305 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
17306 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
17307 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
17308 % U+0397 GREEK CAPITAL LETTER ETA; Eta
17309 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
17310 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
17311 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
17312 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
17313 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
17314 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
17315 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
17316 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
17317 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
17318 % U+039C GREEK CAPITAL LETTER MU; Mu
17319 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
17320 % U+039D GREEK CAPITAL LETTER NU; Nu
17321 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17322 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17323 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17324 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17325 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17326 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17327 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17328 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17329 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17330 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17331 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17332 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
17333 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17334 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
17335 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17336 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17337 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17338 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17339 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17340 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
17341 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17342 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
17343 % \Omega (LaTeX)
17344 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17345 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17346 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17347 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17348 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
17349 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17350 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17351 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17352 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
17353 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17354 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos

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17355 \DeclareTextCompositeCommand{\'}{PU}{\texteta}{\83\256}% U+03AE
17356 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
17357 \DeclareTextCompositeCommand{\'}{PU}{\textiota}{\83\257}% U+03AF
17358 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17359 % AND TONOS; upsilondieresisto
17360 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
17361 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17362 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17363 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17364 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17365 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17366 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17367 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17368 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17369 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17370 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17371 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17372 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17373 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17374 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17375 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17376 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17377 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17378 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17379 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17380 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17381 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17382 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17383 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17384 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17385 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17386 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17387 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17388 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17389 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17390 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17391 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17392 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17393 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17394 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17395 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17396 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17397 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17398 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17399 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17400 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17401 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17402 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17403 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17404 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17405 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17406 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17407 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17408 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17409 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17410 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17411 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis

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17412 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17413 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
        silondieresis
17414 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17415 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17416 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17417 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17418 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17419 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17420 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17421 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17422 % U+03DA GREEK LETTER STIGMA; Stigmatgreek
17423 \DeclareTextCommand{\textStigmatgreek}{PU}{\83\332}% U+03DA
17424 % U+03DB GREEK SMALL LETTER STIGMA
17425 \DeclareTextCommand{\textstigmatgreek}{PU}{\83\333}% U+03DB
17426 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17427 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17428 % U+03DD GREEK SMALL LETTER DIGAMMA
17429 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17430 %* \textdigammagreek -> \digamma (AmS)
17431 % U+03DE GREEK LETTER KOPPA; Koppagreek
17432 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17433 % U+03DF GREEK SMALL LETTER KOPPA
17434 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17435 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17436 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17437 % U+03E1 GREEK SMALL LETTER SAMPI
17438 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17439 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17440 % \backepsilon (AmS)
17441 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6

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51.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

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17442 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17443 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\000}% U+0400
17444 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
17445 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17446 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
17447 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17448 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17449 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17450 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
17451 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
17452 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17453 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17454 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17455 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17456 % Icyrillic, *afii10055
17457 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17458 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
17459 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17460 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
17461 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17462 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17463 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058

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17464 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17465 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17466 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17467 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17468 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17469 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17470 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17471 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17472 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17473 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17474 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17475 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17476 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17477 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17478 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17479 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17480 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17481 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17482 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17483 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17484 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17485 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17486 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17487 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17488 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17489 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17490 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17491 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17492 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17493 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17494 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17495 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17496 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17497 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17498 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17499 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17500 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17501 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17502 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17503 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17504 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17505 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17506 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17507 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17508 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17509 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17510 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17511 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17512 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17513 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17514 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17515 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17516 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17517 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17518 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17519 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17520 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424

17521 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17522 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17523 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17524 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17525 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17526 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17527 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17528 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17529 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17530 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17531 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17532 % Hardsigncyrillic, *afii10044
17533 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17534 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17535 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17536 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17537 % Softsigncyrillic, *afii10046
17538 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17539 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
17540 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17541 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17542 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17543 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17544 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17545 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17546 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17547 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17548 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17549 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17550 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17551 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17552 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17553 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17554 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17555 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17556 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17557 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
17558 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17559 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17560 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17561 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17562 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17563 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17564 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17565 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17566 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17567 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17568 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17569 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
17570 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17571 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
17572 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17573 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17574 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17575 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17576 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17577 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F

17578 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17579 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
17580 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17581 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
17582 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17583 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
17584 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17585 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
17586 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17587 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
17588 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17589 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
17590 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17591 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
17592 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17593 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
17594 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17595 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
17596 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17597 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
17598 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17599 \DeclareTextCommand{\cyrhdsn}{PU}{\84\112}% U+044A
17600 %* \cyrhdsn -> \hardsign (tipa)
17601 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17602 \DeclareTextCommand{\cyry}{PU}{\84\113}% U+044B
17603 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17604 \DeclareTextCommand{\cyrsftsn}{PU}{\84\114}% U+044C
17605 %* \cyrsftsn -> \softsign (tipa)
17606 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17607 \DeclareTextCommand{\cyrrev}{PU}{\84\115}% U+044D
17608 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17609 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
17610 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17611 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
17612 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17613 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
17614 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17615 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
17616 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
17617 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17618 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17619 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17620 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17621 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17622 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17623 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17624 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17625 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17626 % *afii10103, icyrillic
17627 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17628 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17629 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17630 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17631 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17632 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17633 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic

17634 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
17635 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17636 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17637 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17638 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17639 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17640 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17641 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17642 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17643 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17644 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17645 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17646 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17647 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17648 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17649 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17650 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17651 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17652 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17653 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17654 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17655 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17656 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17657 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17658 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17659 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17660 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
17661 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17662 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
17663 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
17664 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17665 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17666 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17667 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17668 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17669 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17670 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17671 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17672 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17673 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
17674 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic
17675 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
17676 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
17677 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
17678 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
17679 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
17680 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
17681 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
17682 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
17683 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
17684 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
17685 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
17686 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic

17687 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17688 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 17689 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17690 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 17691 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17692 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17693 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17694 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17695 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17696 % GRAVE ACCENT; izhitsadblgravecyrillic
 17697 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17698 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17699 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17700 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17701 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17702 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 17703 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17704 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17705 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17706 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 17707 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17708 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 17709 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17710 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17711 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17712 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17713 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17714 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17715 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17716 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17717 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17718 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17719 \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; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17720 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17721 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17722 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17723 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17724 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17725 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17726 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17727 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17728 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17729 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E

17730 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17731 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17732 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17733 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17734 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 17735 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17736 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17737 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17738 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17739 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17740 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17741 % Ghemiddlehookcyrillic
 17742 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17743 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17744 % ghemiddlehookcyrillic
 17745 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17746 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17747 % Zhedescendercyrillic
 17748 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17749 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17750 % zhedescendercyrillic
 17751 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17752 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17753 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17754 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17755 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 17756 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17757 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17758 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 17759 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17760 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
 dercyrillic
 17761 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17762 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17763 % Kavertikalstrokecyrillic
 17764 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17765 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17766 % kavertikalstrokecyrillic
 17767 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 17768 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17769 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17770 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 17771 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 17772 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 17773 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 17774 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 17775 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 17776 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 17777 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 17778 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-

cyrillic

17779 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3

17780 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic

17781 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4

17782 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic

17783 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5

17784 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic

17785 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6

17786 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic

17787 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7

17788 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic

17789 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8

17790 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic

17791 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9

17792 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic

17793 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA

17794 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA

17795 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic

17796 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB

17797 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB

17798 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic

17799 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC

17800 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic

17801 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD

17802 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic

17803 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE

17804 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic

17805 \DeclareTextCommand{\cyr}{PU}{\84\257}% U+04AF

17806 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic

17807 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0

17808 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic

17809 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1

17810 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic

17811 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2

17812 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic

17813 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3

17814 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic

17815 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4

17816 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic

17817 \DeclareTextCommand{\cyr tetse}{PU}{\84\265}% U+04B5

17818 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;

17819 % Chedescendercyrillic

17820 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6

17821 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic

17822 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7

17823 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
17824 % Cheverticalstrokecyrillic
17825 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17826 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17827 % cheverticalstrokecyrillic
17828 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17829 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17830 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17831 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17832 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17833 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
cyrillic
17834 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17835 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
lic
17836 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
17837 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
DER; Chedescenderabkhasiancyrillic
17838 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17839 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17840 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
DER; chedescenderabkhasiancyrillic
17841 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
17842 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
17843 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17844 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17845 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17846 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17847 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17848 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
17849 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
17850 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
17851 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
17852 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
17853 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
17854 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
17855 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
17856 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
17857 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
17858 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
17859 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
17860 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
17861 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
siancyrillic
17862 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
17863 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
cyrillic
17864 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
17865 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
17866 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
17867 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
17868 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
17869 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
17870 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
17871 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
17872 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1

17873 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 17874 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 17875 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17876 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 17877 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17878 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17879 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17880 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17881 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevescyrillic
 17882 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17883 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevescyrillic
 17884 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17885 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17886 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17887 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17888 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 17889 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17890 % Schwadiesiscyrillic
 17891 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17892 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17893 % schwadiesiscyrillic
 17894 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
 17895 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
 17896 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
 17897 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
 17898 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\335}% U+04DD
 17899 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
 17900 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 17901 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
 17902 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 17903 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
 17904 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 17905 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 17906 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 17907 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 17908 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
 17909 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 17910 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
 17911 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 17912 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 17913 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 17914 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
 17915 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
 17916 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 17917 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 17918 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 17919 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 17920 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 17921 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic

17922 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 17923 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
 17924 % Obarreddieresis Cyrillic
 17925 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 17926 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
 17927 % obarreddieresis Cyrillic
 17928 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 17929 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 17930 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 17931 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 17932 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 17933 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacron Cyrillic
 17934 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
 17935 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacron Cyrillic
 17936 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
 17937 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresis Cyrillic
 17938 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 17939 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresis Cyrillic
 17940 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 17941 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlaut Cyrillic
 17942 \DeclareTextCompositeCommand{H}{PU}{\CYRU}{\84\362}% U+04F2
 17943 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlaut Cyrillic
 17944 \DeclareTextCompositeCommand{H}{PU}{\cyru}{\84\363}% U+04F3
 17945 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresis Cyrillic
 17946 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 17947 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresis Cyrillic
 17948 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 17949 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 17950 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 17951 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 17952 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 17953 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresis Cyrillic
 17954 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 17955 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresis Cyrillic
 17956 \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
 17957 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 17958 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 17959 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 17960 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

17961 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17962 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17963 % U+05D0 HEBREW LETTER ALEF
17964 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17965 % U+05D1 HEBREW LETTER BET
17966 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17967 % U+05D2 HEBREW LETTER GIMEL
17968 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17969 % U+05D3 HEBREW LETTER DALET
17970 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17971 % U+05D4 HEBREW LETTER HE
17972 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17973 % U+05D5 HEBREW LETTER VAV
17974 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17975 % U+05D6 HEBREW LETTER ZAYIN
17976 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17977 % U+05D7 HEBREW LETTER HET
17978 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
17979 % U+05D8 HEBREW LETTER TET
17980 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17981 % U+05D9 HEBREW LETTER YOD
17982 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17983 % U+05DA HEBREW LETTER FINAL KAF
17984 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17985 % U+05DB HEBREW LETTER KAF
17986 \DeclareTextCommand{\hebkaf}{PU}{\85\333}% U+05DB
17987 % U+05DC HEBREW LETTER LAMED
17988 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17989 % U+05DD HEBREW LETTER FINAL MEM
17990 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
17991 % U+05DE HEBREW LETTER MEM
17992 \DeclareTextCommand{\hebmeme}{PU}{\85\336}% U+05DE
17993 % U+05DF HEBREW LETTER FINAL NUN
17994 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
17995 % U+05E0 HEBREW LETTER NUN
17996 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
17997 % U+05E1 HEBREW LETTER SAMEKH
17998 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
17999 % U+05E2 HEBREW LETTER AYIN
18000 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
18001 % U+05E3 HEBREW LETTER FINAL PE
18002 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
18003 % U+05E4 HEBREW LETTER PE
18004 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
18005 % U+05E5 HEBREW LETTER FINAL TSADI
18006 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
18007 % U+05E6 HEBREW LETTER TSADI
18008 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
18009 % U+05E7 HEBREW LETTER QOF
18010 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
18011 % U+05E8 HEBREW LETTER RESH
18012 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
18013 % U+05E9 HEBREW LETTER SHIN
18014 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
18015 %* \hebshin -> \hebsin (he8)
18016 % U+05EA HEBREW LETTER TAV
18017 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA

18018 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 18019 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 18020 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 18021 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 18022 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 18023 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

18024 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 18025 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

18026 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
 18027 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
 18028 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 18029 \DeclareTextCommand{\textscd}{PU}{\9035\005}% U+1D05
 18030 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
 18031 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
 18032 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
 18033 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
 18034 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 18035 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 18036 %* \textPUscK -> \textscK (tipx)
 18037 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)
 18038 \DeclareTextCommand{\textPUscM}{PU}{\9035\015}% U+1D0D
 18039 %* \textPUscM -> \textscM (tipx)
 18040 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 18041 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 18042 %* \textPUscP -> \textscP (tipx)
 18043 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 18044 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 18045 %* \textPUrevscr -> \textrevscr (tipx)
 18046 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \scu (wsuipa)
 18047 \DeclareTextCommand{\textscU}{PU}{\9035\034}% U+1D1C
 18048 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 18049 \DeclareTextCommand{\textiiinferior}{PU}{\9035\142}% U+1D62
 18050 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 18051 \DeclareTextCommand{\textrininferior}{PU}{\9035\143}% U+1D63
 18052 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 18053 \DeclareTextCommand{\textuiinferior}{PU}{\9035\144}% U+1D64
 18054 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 18055 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}% U+1D65
 18056 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 18057 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}% U+1D66
 18058 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 18059 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}% U+1D67
 18060 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 18061 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}% U+1D68
 18062 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 18063 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}% U+1D69
 18064 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 18065 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}% U+1D6A
 18066 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 18067 % \barsci (wsuipa)
 18068 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}% U+1D7B
 18069 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)

18070 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 18071 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 18072 % \barscu (wsuipa)
 18073 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

18074 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 18075 \DeclareTextCommand{\textPurhooka}{PU}{\9035\217}% U+1D8F
 18076 %* \textPurhooka -> \textrhooka (tipx)
 18077 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 18078 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 18079 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 18080 \DeclareTextCommand{\textPurhooke}{PU}{\9035\222}% U+1D92
 18081 %* \textPurhooke -> \textrhooke (tipx)
 18082 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 18083 % \textrhookepsilon (tipx)
 18084 \DeclareTextCommand{\textPurhookepsilon}{PU}{\9035\223}% U+1D93
 18085 %* \textPurhookepsilon -> \textrhookepsilon (tipx)
 18086 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 18087 % \textrhookopeno (tipx)
 18088 \DeclareTextCommand{\textPurhookopeno}{PU}{\9035\227}% U+1D97
 18089 %* \textPurhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18090 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 18091 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 18092 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 18093 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 18094 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 18095 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 18096 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 18097 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 18098 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 18099 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 18100 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 18101 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 18102 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 18103 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 18104 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 18105 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 18106 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 18107 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 18108 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 18109 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 18110 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
 18111 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
 18112 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
 18113 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
 18114 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 18115 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 18116 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 18117 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 18118 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 18119 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10

18120 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
18121 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
18122 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
18123 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
18124 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
18125 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
18126 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
18127 % Emacrongrave
18128 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
18129 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
18130 % emacrongrave
18131 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
18132 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
18133 % Emacronacute
18134 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
18135 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
18136 % emacronacute
18137 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
18138 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
18139 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18140 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18141 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18142 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18143 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18144 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18145 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
18146 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
18147 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
18148 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
18149 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
18150 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
18151 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
18152 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
18153 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
18154 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
18155 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
18156 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
18157 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
18158 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
18159 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
18160 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
18161 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18162 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18163 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
18164 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18165 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
18166 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18167 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18168 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18169 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
18170 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
18171 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
18172 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow

18173 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
 18174 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
 18175 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\054}% U+1E2C
 18176 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
 18177 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
 18178 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
 18179 \DeclareTextCompositeCommand{'}{PU}{K}{\9036\060}% U+1E30
 18180 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
 18181 \DeclareTextCompositeCommand{'}{PU}{k}{\9036\061}% U+1E31
 18182 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
 18183 \DeclareTextCompositeCommand{d}{PU}{K}{\9036\062}% U+1E32
 18184 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
 18185 \DeclareTextCompositeCommand{d}{PU}{k}{\9036\063}% U+1E33
 18186 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
 18187 \DeclareTextCompositeCommand{b}{PU}{K}{\9036\064}% U+1E34
 18188 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
 18189 \DeclareTextCompositeCommand{b}{PU}{k}{\9036\065}% U+1E35
 18190 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
 18191 \DeclareTextCompositeCommand{d}{PU}{L}{\9036\066}% U+1E36
 18192 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
 18193 \DeclareTextCompositeCommand{d}{PU}{l}{\9036\067}% U+1E37
 18194 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
 18195 \DeclareTextCompositeCommand{b}{PU}{L}{\9036\072}% U+1E3A
 18196 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
 18197 \DeclareTextCompositeCommand{b}{PU}{l}{\9036\073}% U+1E3B
 18198 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
 cumflexbelow
 18199 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
 18200 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
 cumflexbelow
 18201 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
 18202 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
 18203 \DeclareTextCompositeCommand{'}{PU}{M}{\9036\076}% U+1E3E
 18204 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
 18205 \DeclareTextCompositeCommand{'}{PU}{m}{\9036\077}% U+1E3F
 18206 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
 18207 \DeclareTextCompositeCommand{.}{PU}{M}{\9036\100}% U+1E40
 18208 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
 18209 \DeclareTextCompositeCommand{.}{PU}{m}{\9036\101}% U+1E41
 18210 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
 18211 \DeclareTextCompositeCommand{d}{PU}{M}{\9036\102}% U+1E42
 18212 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
 18213 \DeclareTextCompositeCommand{d}{PU}{m}{\9036\103}% U+1E43
 18214 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
 18215 \DeclareTextCompositeCommand{.}{PU}{N}{\9036\104}% U+1E44
 18216 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
 18217 \DeclareTextCompositeCommand{.}{PU}{n}{\9036\105}% U+1E45
 18218 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
 18219 \DeclareTextCompositeCommand{d}{PU}{N}{\9036\106}% U+1E46
 18220 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
 18221 \DeclareTextCompositeCommand{d}{PU}{n}{\9036\107}% U+1E47
 18222 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
 18223 \DeclareTextCompositeCommand{b}{PU}{N}{\9036\110}% U+1E48
 18224 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
 18225 \DeclareTextCompositeCommand{b}{PU}{n}{\9036\111}% U+1E49
 18226 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
 cumflexbelow

18227 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
 18228 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
 cumflexbelow
 18229 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
 18230 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
 18231 % Omacrongrave
 18232 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
 18233 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
 18234 % omacrongrave
 18235 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
 18236 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
 18237 % Omacronacute
 18238 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
 18239 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 18240 % omacronacute
 18241 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 18242 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 18243 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 18244 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 18245 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 18246 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 18247 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 18248 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 18249 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 18250 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 18251 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 18252 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 18253 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 18254 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 18255 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
 18256 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 18257 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 18258 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 18259 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 18260 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 18261 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 18262 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 18263 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 18264 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 18265 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 18266 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 18267 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 18268 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 18269 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 18270 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 18271 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 18272 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 18273 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 18274 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 18275 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 18276 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 18277 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 18278 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 18279 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 18280 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 18281 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 18282 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-

cumflexbelow
 18283 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 18284 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 18285 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 18286 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 18287 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 18288 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udieresis-
 below
 18289 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 18290 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 18291 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 18292 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 18293 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 18294 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 18295 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 18296 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 18297 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 18298 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 18299 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 18300 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 18301 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 18302 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 18303 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 18304 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 18305 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 18306 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
 18307 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
 18308 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
 18309 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
 18310 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
 18311 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 18312 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 18313 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 18314 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 18315 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
 18316 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 18317 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
 18318 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 18319 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
 18320 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 18321 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
 18322 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
 18323 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
 18324 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
 18325 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
 18326 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 18327 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
 18328 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 18329 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
 18330 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 18331 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
 18332 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 18333 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D

18334 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
18335 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
18336 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
18337 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
18338 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
18339 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
18340 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
18341 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
18342 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
18343 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
18344 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
18345 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
18346 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18347 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
18348 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18349 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
18350 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18351 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
18352 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18353 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
18354 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18355 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
18356 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
18357 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
18358 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
18359 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
18360 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
18361 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
18362 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
18363 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
18364 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
18365 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
18366 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
18367 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
18368 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
18369 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
18370 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
18371 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
18372 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
18373 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
18374 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
18375 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
18376 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
18377 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
18378 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
18379 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
18380 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
18381 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
18382 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
18383 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
18384 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
18385 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
18386 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
18387 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
18388 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
18389 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4

18390 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18391 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18392 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18393 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18394 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18395 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18396 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 18397 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18398 % U+2013 EN DASH; endash
 18399 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18400 % U+2014 EM DASH; emdash
 18401 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18402 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18403 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18404 %* \textbardbl -> \textdoublevertline (tipa)
 18405 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18406 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18407 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18408 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18409 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18410 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18411 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18412 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18413 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18414 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18415 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18416 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18417 % U+2020 DAGGER; dagger
 18418 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18419 %* \textdagger -> \dag (LaTeX)
 18420 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18421 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18422 %* \textdaggerdbl -> \ddagger (LaTeX)
 18423 %* \textdaggerdbl -> \ddag (LaTeX)
 18424 % U+2022 BULLET; bullet
 18425 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18426 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18427 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18428 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18429 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18430 %* \textellipsis -> \mathellipsis
 18431 % U+2030 PER MILLE SIGN; perthousand
 18432 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18433 % U+2031 PER TEN THOUSAND SIGN
 18434 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18435 % U+2032 PRIME; minute; \prime (MnSymbol)
 18436 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18437 % U+2033 DOUBLE PRIME; \second (mathabx)
 18438 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18439 % U+2034 TRIPLE PRIME; \third (mathabx)
 18440 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18441 % U+2035 REVERSED PRIME; \backprime (AmS)
 18442 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18443 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft

18444 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 18445 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 inglright
 18446 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 18447 % U+203B REFERENCE MARK; referencemark
 18448 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18449 % U+203D INTERROBANG
 18450 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18451 % U+2044 FRACTION SLASH; fraction
 18452 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18453 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18454 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18455 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18456 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18457 % U+2052 COMMERCIAL MINUS SIGN
 18458 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18459 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18460 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18461 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18462 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18463 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18464 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18465 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18466 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18467 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18468 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18469 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18470 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18471 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18472 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18473 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18474 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18475 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18476 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18477 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18478 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18479 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18480 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18481 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18482 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18483 % U+207B SUPERSCRIPT MINUS
 18484 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18485 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18486 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 18487 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18488 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18489 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18490 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18491 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18492 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18493 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18494 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 18495 % U+2081 SUBSCRIPT ONE; oneinferior
 18496 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18497 % U+2082 SUBSCRIPT TWO; twoinferior

18498 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18499 % U+2083 SUBSCRIPT THREE; threeinferior
 18500 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18501 % U+2084 SUBSCRIPT FOUR; fourinferior
 18502 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18503 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18504 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18505 % U+2086 SUBSCRIPT SIX; sixinferior
 18506 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18507 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18508 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18509 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18510 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18511 % U+2089 SUBSCRIPT NINE; nineinferior
 18512 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18513 % U+208A SUBSCRIPT PLUS SIGN
 18514 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18515 % U+208B SUBSCRIPT MINUS
 18516 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18517 % U+208C SUBSCRIPT EQUALS SIGN
 18518 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18519 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18520 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18521 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18522 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18523 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18524 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18525 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18526 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18527 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
 18528 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18529 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18530 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18531 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18532 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18533 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18534 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18535 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18536 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18537 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18538 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18539 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18540 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18541 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18542 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18543 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18544 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18545 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18546 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18547 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18548 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18549 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18550 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18551 % U+20A4 LIRA SIGN; afi08941, *lira
 18552 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4

18553 % U+20A6 NAIRA SIGN
 18554 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18555 % U+20A7 PESETA SIGN; peseta
 18556 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18557 % U+20A9 WON SIGN; won
 18558 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18559 % U+20AB DONG SIGN; dong
 18560 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18561 % U+20AC EURO SIGN; *Euro, euro
 18562 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18563 %* \texteuro -> \EurDig (marvosym)
 18564 %* \texteuro -> \EURdig (marvosym)
 18565 %* \texteuro -> \EurHv (marvosym)
 18566 %* \texteuro -> \EURhv (marvosym)
 18567 %* \texteuro -> \EurCr (marvosym)
 18568 %* \texteuro -> \EURcr (marvosym)
 18569 %* \texteuro -> \EurTm (marvosym)
 18570 %* \texteuro -> \EURtm (marvosym)
 18571 %* \texteuro -> \Eur (marvosym)
 18572 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18573 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18574 %* \textDeleatur -> \Denarius (marvosym)
 18575 % U+20B1 PESO SIGN
 18576 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18577 % U+20B2 GUARANI SIGN
 18578 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18579 % U+2103 DEGREE CELSIUS; centigrade
 18580 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 18581 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18582 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18583 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18584 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18585 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18586 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18587 % U+2116 NUMERO SIGN; *afii61352, numero
 18588 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18589 % U+2117 SOUND RECORDING COPYRIGHT
 18590 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18591 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18592 % weierstrass; \wp (LaTeX)
 18593 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18594 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18595 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18596 % U+211E PRESCRIPTION TAKE; prescription
 18597 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18598 % U+2120 SERVICE MARK
 18599 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18600 % U+2122 TRADE MARK SIGN; trademark
 18601 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18602 % U+2126 OHM SIGN; Ohm, Omega
 18603 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18604 % U+2127 INVERTED OHM SIGN
 18605 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18606 %* \textmho -> \agemO (wasysym)

18607 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18608 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18609 % U+212B ANGSTROM SIGN; angstrom
 18610 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18611 % U+212E ESTIMATED SYMBOL; estimated
 18612 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18613 %* \textestimated -> \EstimatedSign (marvosym)
 18614 %* \textestimated -> \Ecommerce (marvosym)
 18615 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18616 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18617 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18618 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18619 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18620 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18621 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18622 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18623 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18624 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18625 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18626 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18627 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18628 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18629 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18630 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18631 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18632 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18633 % U+2150 VULGAR FRACTION ONE SEVENTH
 18634 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18635 % U+2151 VULGAR FRACTION ONE NINTH
 18636 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18637 % U+2152 VULGAR FRACTION ONE TENTH
 18638 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18639 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18640 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18641 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18642 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18643 % U+2155 VULGAR FRACTION ONE FIFTH
 18644 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18645 % U+2156 VULGAR FRACTION TWO FIFTHS
 18646 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18647 % U+2157 VULGAR FRACTION THREE FIFTHS
 18648 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18649 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18650 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18651 % U+2159 VULGAR FRACTION ONE SIXTH
 18652 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18653 % U+215A VULGAR FRACTION FIVE SIXTHS
 18654 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18655 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18656 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18657 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18658 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18659 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18660 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18661 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths

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18662 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
18663 % U+2184 LATIN SMALL LETTER REVERSED C
18664 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
18665 % U+2189 VULGAR FRACTION ZERO THIRDS
18666 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

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51.2.21 Arrows: U+2190 to U+21FF

```

18667 % U+2190 LEFTWARDS ARROW; arrowleft
18668 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
18669 % U+2191 UPWARDS ARROW; arrowup
18670 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
18671 % U+2192 RIGHTWARDS ARROW; arrowright
18672 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
18673 %* \textrightarrow -> \MVRightArrow (marvosym)
18674 %* \textrightarrow -> \MVRightarrow (marvosym)
18675 % U+2193 DOWNWARDS ARROW; arrowdown
18676 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
18677 %* \textdownarrow -> \MVAArrowDown (marvosym)
18678 %* \textdownarrow -> \Force (marvosym)
18679 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightharrow (LaTeX)
18680 \DeclareTextCommand{\textleftrightharrow}{PU}{\9041\224}%* U+2194
18681 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
18682 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
18683 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
18684 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
18685 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
18686 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
18687 %* \textnearrow -> \textglobrise (tipa)
18688 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
18689 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
18690 %* \textsearrow -> \textglobfall (tipa)
18691 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18692 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18693 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
18694 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18695 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
18696 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18697 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18698 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18699 % \twoheadleftarrow (txfonts/pxfonts)
18700 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18701 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18702 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18703 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18704 % \twoheadrightarrow (AmS)
18705 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18706 % \twoheadrightarrow (txfonts/pxfonts)
18707 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18708 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
18709 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18710 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18711 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18712 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18713 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18714 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18715 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6

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18716 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18717 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18718 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18719 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18720 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18721 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18722 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18723 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18724 % U+21AE LEFT RIGHT ARROW WITH STROKE; \nleftrightarrow (AmS)
18725 \DeclareTextCommand{\textnleftrightarrow}{PU}{\9041\256}%* U+21AE
18726 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18727 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18728 %* \textlightning -> \Lightning (marvosym)
18729 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18730 % \dls (mathabx)
18731 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18732 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18733 % \curvearrowleft (AmS)
18734 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18735 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18736 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18737 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;
18738 % \leftharpoonup (LaTeX)
18739 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18740 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18741 % \leftharpoondown (LaTeX)
18742 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18743 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18744 % \upharpoonright (AmS)
18745 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18746 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18747 % \upharpoonleft (AmS)
18748 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18749 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
barbup
18750 % \rightharpoonup (LaTeX)
18751 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18752 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18753 % \rightharpoondown (LaTeX)
18754 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18755 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18756 % \downharpoonright (AmS)
18757 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18758 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18759 % \downharpoonleft (AmS)
18760 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18761 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18762 % \rightarrowoverleftarrow; \rightleftarrows (MnSymbol)
18763 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18764 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
rowupleftofdown;
18765 % \updownarrows (MnSymbol)
18766 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18767 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
overrightarrow;
18768 % \leftrightarrows (AmS)

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18769 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18770 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18771 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18772 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18773 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18774 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18775 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18776 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18777 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18778 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18779 % \leftrightharpoons (AmS);
18780 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18781 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18782 % \rightleftharpoons (LaTeX, AmS)
18783 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18784 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
    blstroke;
18785 % \nLeftarrow (AmS)
18786 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18787 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \Leftrightarrow (AmS)
18788 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18789 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
    blstroke;
18790 % \nRightarrow (AmS)
18791 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18792 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18793 % \Leftarrow (LaTeX)
18794 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18795 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18796 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18797 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18798 % \Rightarrow (LaTeX)
18799 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
18800 %* \textRightarrow -> \Conclusion (marvosym)
18801 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (La-
    TeX)
18802 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18803 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18804 % \Leftrightarrow (LaTeX)
18805 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18806 %* \textLeftrightarrow -> \Equivalence (marvosym)
18807 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18808 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18809 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18810 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18811 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18812 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18813 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18814 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18815 % U+21D9 SOUTH WEST DOUBLE ARROW; \Svarrow (MnSymbol)
18816 \DeclareTextCommand{\textSvarrow}{PU}{\9041\331}%* U+21D9
18817 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18818 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18819 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18820 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18821 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)

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18822 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18823 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18824 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18825 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18826 % \dashleftarrow (AmS)
18827 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
18828 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
18829 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
18830 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
18831 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow
(AmS)
18832 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
18833 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
18834 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownar-
row (MnSymbol)
18835 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
18836 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18837 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18838 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18839 % \downuparrows (MnSymbol)
18840 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18841 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18842 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18843 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18844 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18845 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtri-
angle (stmaryrd)
18846 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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51.2.22 Mathematical Operators: U+2200 to U+22FF

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18847 % U+2200 FOR ALL; forall; \forall (LaTeX)
18848 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18849 % U+2201 COMPLEMENT; \complement (AmS)
18850 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18851 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18852 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18853 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18854 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18855 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18856 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18857 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18858 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18859 %* \textemptyset -> \varnothing (AmS)
18860 % U+2206 INCREMENT; increment, Deta; \triangle (LaTeX)
18861 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18862 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18863 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18864 % U+2208 ELEMENT OF; element; \in (LaTeX)
18865 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18866 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18867 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18868 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18869 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18870 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18871 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18872 %* \textni -> \owns (mathabx)

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18873 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18874 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18875 %* \textnotowner -> \notni (txfonts/pxfonts)
18876 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18877 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18878 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18879 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18880 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18881 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18882 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18883 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18884 % U+2212 MINUS SIGN; minus
18885 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18886 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18887 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18888 % U+2214 DOT PLUS; \dotplus (AmS)
18889 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18890 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18891 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18892 % \DividesNot (marvosym)
18893 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18894 % U+2216 SET MINUS; \setminus (LaTeX)
18895 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18896 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18897 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18898 % U+2218 RING OPERATOR; \circ (LaTeX)
18899 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18900 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18901 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18902 % U+221A SQUARE ROOT; radical
18903 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18904 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18905 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18906 %* \textpropto -> \varproportional (wasysym)
18907 % U+221E INFINITY; infinity; \infty (LaTeX)
18908 \DeclareTextCommand{\textinfinity}{PU}{\9042\036}%* U+221E
18909 % U+2220 ANGLE; angle; \angle (LaTeX)
18910 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18911 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18912 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18913 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18914 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18915 %* \textsphericalangle -> \varangle (wasysym)
18916 %* \textsphericalangle -> \Anglesign (marvosym)
18917 %* \textsphericalangle -> \AngleSign (marvosym)
18918 % U+2223 DIVIDES; divides; \mid (LaTeX)
18919 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18920 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18921 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18922 %* \textnmid -> \notdivides (mathabx)
18923 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18924 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18925 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18926 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18927 %* \textnparallel -> nUpdownline (MnSymbol)
18928 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18929 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227

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18930 % \owedge (stmaryrd)
18931 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18932 %* \textowedge -> \varowedge (stmaryrd)
18933 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18934 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18935 % \ovee (stmaryrd)
18936 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18937 %* \textovee -> \varovee (stmaryrd)
18938 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18939 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18940 % U+222A UNION; union; \cup (LaTeX)
18941 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18942 % U+222B INTEGRAL; integral; \int (LaTeX)
18943 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18944 %* \textint -> \varint (wasysym)
18945 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18946 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18947 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18948 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18949 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18950 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18951 %* \textoint -> \varoint (wasysym)
18952 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18953 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18954 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18955 % \ointclockwise (txfonts/pxfonts)
18956 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18957 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
      fonts/pxfonts)
18958 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18959 % U+2234 THEREFORE; therefore; \therefore (AmS)
18960 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18961 %* \texttherefore -> uptherefore (MnSymbol)
18962 % U+2235 BECAUSE; because; \because (AmS)
18963 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18964 %* \textbecause -> \downtherefore (MnSymbol)
18965 % U+2236 RATIO; \vdotdot (MnSymbol)
18966 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18967 % U+2237 PROPORTION; \squaredots (MnSymbol)
18968 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18969 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18970 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18971 %* \textdotminus -> \textdotdiv (mathabx)
18972 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18973 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18974 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18975 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18976 %* \textsim -> \AC (wasysym)
18977 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18978 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18979 % \nbacksim (txfonts/pxfonts)
18980 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18981 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18982 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18983 %* \textwr -> \wreath (MnSymbol)
18984 % U+2241 NOT TILDE; \nsim (AmS)
18985 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241

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18986 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18987 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18988 % \neqsim (MnSymbol)
18989 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18990 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
18991 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18992 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18993 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18994 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18995 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18996 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18997 % \ncong (AmS)
18998 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18999 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
19000 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
19001 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts0)
19002 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
19003 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
19004 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
19005 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
19006 % \napproxeq (txfonts/pxfonts)
19007 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
19008 % U+224B TRIPLE TILDE; \triple sim (MnSymbol)
19009 \DeclareTextCommand{\texttriple sim}{PU}{\9042\113}%* U+224B
19010 %* \texttriple sim -> \VHF (wasysym)
19011 % \ntriple sim (MnSymbol)
19012 \DeclareTextCommand{\textntriple sim}{PU}{\9042\113\83\070}%* U+224B U+0338
19013 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
19014 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
19015 % \nbackcong (MnSymbol)
19016 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
19017 % U+224D EQUIVALENT TO; \asymp (LaTeX)
19018 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
19019 % \nasymp (txfonts/pxfonts)
19020 \DeclareTextCommand{\textnasymp}{PU}{\9042\115\83\070}%* U+224D U+0338
19021 %* \textnasymp -> \notasympt (mathabx)
19022 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
19023 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
19024 % \nBumpeq (txfonts/pxfonts)
19025 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
19026 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
19027 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
19028 % \nbumpeq (txfonts/pxfonts)
19029 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
19030 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
19031 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
19032 % \ndoteq (MnSymbol)
19033 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
19034 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
19035 % \doteqdot (AmS)
19036 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
19037 %* \textdoteqdot -> \Doteq (MnSymbol)
19038 % \nDoteq (MnSymbol)
19039 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
19040 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
qualorimage;

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19041 % \fallingdotseq (AmS)
19042 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
19043 % \nfallingdotseq (MnSymbol)
19044 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
19045 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproximatelyequal;
19046 % \risingdotseq (AmS)
19047 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
19048 % \nrisingdotseq (MnSymbol)
19049 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
19050 % U+2254 COLON EQUALS; \colonequals (colonequals)
19051 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
19052 % U+2255 EQUALS COLON; \equalscolon (colonequals)
19053 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
19054 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
19055 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
19056 % \neqcirc (MnSymbol)
19057 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
19058 % U+2257 RING EQUAL TO; \circeq (AmS)
19059 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
19060 % \ncirceq (MnSymbol)
19061 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
19062 % U+2259 ESTIMATES; \hateq (MnSymbol)
19063 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
19064 %* \texthateq -> \corresponds (mathabx)
19065 %* \texthateq -> \Corresponds (marvosym)
19066 % \nhateq (MnSymbol)
19067 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
19068 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
19069 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
19070 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
19071 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
19072 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
19073 %* \textneq -> \nequal (MnSymbol)
19074 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
19075 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
19076 %* \textequiv -> \Congruent (marvosym)
19077 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
19078 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
19079 %* \textnequiv -> \NotCongruent (marvosym)
19080 %* \textnequiv -> \notequiv (mathabx)
19081 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
19082 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
19083 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
19084 %* \textleq -> \LessOrEqual (marvosym)
19085 % U+2265 GREATER-THAN OR EQUAL TO; greaterorequal;
19086 % \ge (LaTeX), \geq (LaTeX)
19087 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
19088 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
19089 %* \textgeq -> \LargerOrEqual (marvosym)
19090 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
19091 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
19092 % \leqq (txfonts/pxfonts)
19093 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
19094 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
19095 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
19096 % \ngeqq (txfonts/pxfonts)

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19097 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
19098 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
19099 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
19100 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
19101 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
19102 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
19103 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
19104 % \nll (txfonts/pxfonts)
19105 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
19106 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
19107 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
19108 % \ngg (txfonts/pxfonts)
19109 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
19110 % U+226C BETWEEN; \between (AmS)
19111 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
19112 % U+226E NOT LESS-THAN; notless; \nless (AmS)
19113 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
19114 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
19115 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
19116 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
19117 % \nleq (AmS)
19118 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
19119 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
19120 % \ngeq (AmS)
19120 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
19121 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)
19122 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
19123 %* \textlessim -> \apprle (wasysym)
19124 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)
19125 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
19126 %* \textgtrsim -> \apprge (wasysym)
19127 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (txfonts/pxfonts)
19128 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
19129 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (txfonts/pxfonts)
19130 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
19131 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
19132 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
19133 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
19134 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
19135 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (txfonts/pxfonts)
19136 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
19137 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (txfonts/pxfonts)
19138 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
19139 % U+227A PRECEDES; precedes; \prec (LaTeX)
19140 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
19141 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
19142 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
19143 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
19144 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
19145 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
19146 \DeclareTextCommand{\textsuccurlyeq}{PU}{\9042\175}%* U+227D
19147 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)

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19148 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
19149 % \nprecsim (txfonts/pxfonts)
19150 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
19151 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
19152 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
19153 % \nsuccsim (txfonts/pxfonts)
19154 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
19155 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
19156 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
19157 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
19158 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
19159 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
19160 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
19161 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
19162 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
19163 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
19164 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
19165 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
19166 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
19167 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
19168 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
19169 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
19170 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
19171 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
19172 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
19173 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
19174 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
19175 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subsetneq (AmS)
19176 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
19177 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supsetneq (AmS)
19178 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
19179 % U+228D MULTISET MULTIPLICATION; \cupdot (MnSymbol)
19180 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
19181 % U+228E MULTISET UNION; \cupplus (MnSymbol)
19182 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
19183 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
19184 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
19185 % \nsqsubset (txfonts/pxfonts)
19186 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
19187 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
19188 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
19189 % \nsqsupset (txfonts/pxfonts)
19190 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
19191 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseteq (LaTeX)
19192 \DeclareTextCommand{\textsqsubseteq}{PU}{\9042\221}%* U+2291
19193 % \nsqsubseteq (txfonts/pxfonts)
19194 \DeclareTextCommand{\textnsqsubseteq}{PU}{\9042\221\83\070}%* U+2291 U+0338
19195 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
19196 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
19197 % \nsqsupseteq (txfonts/pxfonts)
19198 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
19199 % U+2293 SQUARE CAP; \sqcap (LaTeX)
19200 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19201 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19202 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294

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19203 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19204 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19205 %* \textoplus -> \varoplus (stmaryrd)
19206 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19207 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19208 %* \textominus -> \varominus (stmaryrd)
19209 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19210 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19211 %* \textotimes -> \varotimes (stmaryrd)
19212 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19213 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19214 %* \textoslash -> \varoslash (stmaryrd)
19215 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19216 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19217 %* \textodot -> \varodot (stmaryrd)
19218 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19219 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19220 %* \textcircledcirc -> \ocirc (mathabx)
19221 %* \textcircledcirc -> \varocircle (stmaryrd)
19222 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19223 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19224 %* \textcircledast -> \varoast (stmaryrd)
19225 %* \textcircledast -> \oasterisk (mathabx)
19226 % U+229D CIRCLED DASH; \circleddash (AmS)
19227 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19228 % U+229E SQUARED PLUS; \boxplus (AmS)
19229 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19230 % U+229F SQUARED MINUS; \boxminus (AmS)
19231 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19232 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
19233 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19234 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19235 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19236 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19237 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19238 %* \textvdash -> \rightvdash (MnSymbol)
19239 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
19240 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19241 %* \textdashv -> \leftvdash (MnSymbol)
19242 % \ndashv (mathabx)
19243 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19244 %* \textndashv -> \nleftvdash (MnSymbol)
19245 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
19246 \DeclareTextCommand{\textttop}{PU}{\9042\244}%* U+22A4
19247 %* \textttop -> \downvdash (MnSymbol)
19248 % \ndownvdash (MnSymbol)
19249 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19250 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19251 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19252 %* \textbot -> \upvdash (MnSymbol)
19253 % \nupvdash (MnSymbol)
19254 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19255 %* \textnupvdash -> \nperp (MnSymbol)
19256 % U+22A8 TRUE; \vDash (AmS)
19257 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19258 %* \textvDash -> \models (LaTeX)
19259 %* \textvDash -> \rightmodels (MnSymbol)

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19260 % U+22A9 FORCES; \Vdash (AmS)
19261 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19262 %* \textVdash -> \rightVdash (MnSymbol)
19263 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19264 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19265 % \nVdash (mathabx)
19266 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19267 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19268 % \VDash (mathabx)
19269 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19270 %* \textVDash -> \rightModels (MnSymbol)
19271 % U+22AC DOES NOT PROVE; \nvDash (AmS)
19272 \DeclareTextCommand{\textnvDash}{PU}{\9042\254}%* U+22AC
19273 %* \textnvDash -> \nrightvdash (MnSymbol)
19274 % U+22AD NOT TRUE; \nvDash (AmS)
19275 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19276 %* \textnvDash -> \nrightmodels (MnSymbol)
19277 %* \textnvDash -> \nmodels (MnSymbol)
19278 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
19279 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
19280 %* \textnVdash -> \nrightVdash (MnSymbol)
19281 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
    STILE; \nVDash (AmS)
19282 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19283 %* \textnVDash -> \nrightModels (MnSymbol)
19284 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19285 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19286 %* \textlhd -> \lessclosed (MnSymbol)
19287 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19288 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
19289 %* \textrhd -> \gtrclosed (MnSymbol)
19290 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19291 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19292 %* \textunlhd -> \leqclosed (MnSymbol)
19293 %* \textunlhd -> \trianglelefteq (MnSymbol)
19294 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
    texsym, ...)
19295 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19296 %* \textunrhd -> \geqclosed (MnSymbol)
19297 %* \textunrhd -> \trianglerighteq (MnSymbol)
19298 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19299 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19300 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19301 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19302 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19303 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19304 % U+22BB XOR; \veebar (AmS)
19305 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19306 % U+22BC NAND; \barwedge (mathabx)
19307 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19308 % U+22C6 STAR OPERATOR; \star (LaTeX)
19309 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19310 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19311 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19312 % U+22C8 BOWTIE; \bowtie (LaTeX)
19313 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19314 %* \textbowtie -> \Bowtie (wasysym)

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19315 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
 19316 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
 19317 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
 19318 % \rtimes (AmS)
 19319 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
 19320 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
 19321 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
 19322 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
 19323 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
 19324 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
 19325 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
 19326 % \nbacksimeq (txfonts/pxfonts)
 19327 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
 19328 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
 19329 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
 19330 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
 19331 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
 19332 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
 19333 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
 19334 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
 19335 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
 19336 % \nSubset (txfonts/pxfonts)
 19337 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
 19338 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
 19339 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
 19340 % \nSupset (txfonts/pxfonts)
 19341 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
 19342 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
 19343 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
 19344 %* \textCap -> \doublecap (mathabx)
 19345 % U+22D3 DOUBLE UNION; \Cup (AmS)
 19346 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
 19347 %* \textCup -> \doublecup (mathabx)
 19348 % U+22D4 PITCHFORK; \pitchfork (mathabx)
 19349 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
 19350 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
 19351 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
 19352 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
 19353 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
 19354 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
 19355 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
 19356 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
 19357 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
 19358 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
 19359 % \lesseqgtr (AmS)
 19360 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
 19361 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
 19362 % \gtreqless (AmS)
 19363 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
 19364 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
 19365 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
 19366 % \ncurlyeqprec (mathabx)
 19367 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
 19368 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
 19369 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
 19370 % \ncurlyeqsucc (mathabx)
 19371 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338

19372 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
 19373 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
 19374 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
 19375 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
 19376 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nqsubseteq (tx-
 fonts/pxfonts)
 19377 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
 19378 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
 fonts/pxfonts)
 19379 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
 19380 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
 19381 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
 19382 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
 19383 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
 abx)
 19384 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
 19385 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
 19386 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
 19387 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
 19388 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
 19389 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
 19390 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
 19391 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
 19392 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
 19393 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
 19394 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
 19395 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
 19396 %* \textntriangleleft -> \nlessclosed (MnSymbol)
 19397 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright (AmS)
 19398 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
 19399 %* \textntriangleright -> \ngtrclosed (MnSymbol)
 19400 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
 19401 % \ntrianglelefteq (AmS)
 19402 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
 19403 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
 19404 % \ntrianglerighteq (AmS)
 19405 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
 19406 %* \textntrianglerighteq -> \textngeqclosed
 19407 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
 19408 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
 19409 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
 19410 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
 19411 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
 19412 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
 19413 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 19414 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 19415 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 19416 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

19417 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 19418 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 19419 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 19420 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 19421 % U+2311 SQUARE LOZENGE; \wasylozenge (wasysym)
 19422 \DeclareTextCommand{\textwasylozenge}{PU}{\9043\021}%* U+2311

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19423 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19424 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19425 % U+231A WATCH; \clock (wasysym)
19426 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19427 %* \textclock -> \Clocklogo (marvosym)
19428 %* \textclock -> \ClockLogo (marvosym)
19429 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
19430 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19431 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
19432 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19433 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
19434 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19435 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
19436 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19437 % U+2322 FROWN; \frown (LaTeX)
19438 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19439 % U+2323 SMILE; \smile (LaTeX)
19440 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19441 % U+2328 KEYBOARD; \Keyboard (marvosym)
19442 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19443 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
19444 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19445 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
19446 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
19447 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLin (wasysym)
19448 \DeclareTextCommand{\textAPLin}{PU}{\9043\071}%* U+2339
19449 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
19450 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19451 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
19452 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
19453 %* \textstmaryrdbaro -> \baro (stmaryrd)
19454 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
19455 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
19456 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
19457 % \notbackslash (wasysym)
19458 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
19459 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
19460 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
19461 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
19462 % \APLleftarrowbox (wasysym)
19463 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
19464 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
19465 % \APLrightarrowbox (wasysym)
19466 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
19467 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
19468 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
19469 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
19470 % \APLdownarrowbox (wasysym)
19471 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
19472 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
19473 % \APLinput (wasysym)
19474 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
19475 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
19476 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370

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19477 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19478 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19479 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19480 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19481 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19482 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19483 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19484 % \ForwardToIndex (marvosym)
 19485 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19486 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19487 % \RewindToIndex (marvosym)
 19488 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19489 % U+2422 BLANK SYMBOL
 19490 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19491 % U+2423 OPEN BOX; blank
 19492 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19493 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19494 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19495 %* \textbbslash -> \varparalelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19496 % U+2460 CIRCLED DIGIT ONE; onecircle
 19497 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19498 % U+2461 CIRCLED DIGIT TWO; twocircle
 19499 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19500 % U+2462 CIRCLED DIGIT THREE; threecircle
 19501 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19502 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19503 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19504 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19505 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19506 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19507 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19508 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 19509 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19510 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19511 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19512 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19513 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19514 % U+2469 CIRCLED NUMBER TEN; tencircle
 19515 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19516 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19517 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19518 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19519 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19520 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19521 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19522 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 19523 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 19524 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 19525 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E

19526 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 19527 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 19528 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 19529 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 19530 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 19531 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 19532 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 19533 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 19534 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 19535 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 19536 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 19537 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 19538 % \CircledA (marvosym)
 19539 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
 19540 %* \textCircledA -> \CleaningA
 19541 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 19542 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 19543 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 19544 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 19545 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 19546 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19547 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19548 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 19549 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19550 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19551 % \CleaningF (marvosym)
 19552 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19553 % \CleaningFF (marvosym)
 19554 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19555 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 19556 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19557 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19558 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19559 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19560 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19561 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19562 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19563 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19564 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19565 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19566 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19567 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19568 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19569 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19570 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19571 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19572 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19573 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19574 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19575 % \CleaningP (marvosym)
 19576 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19577 % \CleaningPP (marvosym)
 19578 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19579 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19580 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19581 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19582 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7

19583 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19584 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19585 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19586 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19587 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19588 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19589 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19590 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19591 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19592 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19593 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19594 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19595 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19596 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19597 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19598 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19599 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19600 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19601 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19602 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19603 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19604 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19605 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19606 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19607 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19608 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19609 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19610 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19611 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19612 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19613 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19614 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19615 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19616 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19617 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19618 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19619 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19620 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19621 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19622 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19623 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19624 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19625 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19626 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19627 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19628 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19629 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19630 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19631 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19632 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19633 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19634 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19635 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19636 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19637 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19638 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19639 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle

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19640 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
19641 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
19642 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
19643 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
19644 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
19645 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
19646 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
19647 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
19648 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
19649 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
19650 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
19651 % U+24EA CIRCLED DIGIT ZERO
19652 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

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51.2.27 Box Drawing: U+2500 to 257F

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19653 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
      Line (marvosym)
19654 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
19655 %* \textCuttingLine -> \Kutline (marvosym)
19656 %* \textCuttingLine -> \CutLine (marvosym)
19657 %* \textCuttingLine -> \Cutline (marvosym)

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51.2.28 Geometric Shapes: U+25A0 to U+25FF

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19658 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
19659 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
19660 %* \textUParrow -> \MoveUp (marvosym)
19661 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
19662 % \bigtriangleup (LaTeX)
19663 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
19664 %* \textbigtriangleup -> \APLup (wasysym)
19665 %* \textbigtriangleup -> \Bleech (marvosym)
19666 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
19667 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
19668 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
      tion);
19669 % whiterightpointingtriangle; \triangleright (LaTeX)
19670 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
19671 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
19672 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
19673 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
19674 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
19675 %* \textDOWNarrow -> \MoveDown (marvosym)
19676 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
      angle;
19677 % \bigtriangledown (LaTeX)
19678 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19679 %* \textbigtriangledown -> \APLdown (wasysym)
19680 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19681 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19682 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
      striction);
19683 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19684 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19685 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19686 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19687 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19688 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7

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19689 %* \textdiamond -> \Diamond (wasysym)
 19690 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
 19691 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
 19692 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
 19693 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
 19694 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
 19695 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
 19696 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 19697 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
 19698 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
 19699 % \boxbar (stmaryrd)
 19700 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
 19701 % U+25EF LARGE CIRCLE; largecircle
 19702 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
 19703 %* \textbigcircle -> \varbigcirc (stmaryrd)
 19704 %

51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

19705 % U+2601 CLOUD; \Cloud (ifsym)
 19706 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
 19707 % U+2605 BLACK STAR; \FiveStar (bbding)
 19708 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
 19709 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
 19710 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
 19711 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
 19712 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
 19713 %* \textPhone -> \Telefon (marvosym)
 19714 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
 19715 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
 19716 %* \textboxempty -> \Box (wasysym)
 19717 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
 19718 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
 19719 %* \textCheckedbox -> \CheckedBox (marvosym)
 19720 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
 19721 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
 19722 %* \textCrossedbox -> \XBox (wasysym)
 19723 %* \textCrossedbox -> \CrossedBox (marvosym)
 19724 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
 19725 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
 19726 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bbding)
 19727 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
 19728 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bbding)
 19729 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
 19730 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bbding)
 19731 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
 19732 %* \textHandLeft -> \rightpointleft (fourier)
 19733 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
 19734 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
 19735 %* \textHandRight -> \leftpointright (fourier)
 19736 %* \textHandRight -> \PointingHand (marvosym)
 19737 %* \textHandRight -> \Pointinghand (marvosym)
 19738 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
 19739 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
 19740 %* \textRadioactivity -> \Radiation (ifsym)
 19741 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
 19742 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
 19743 % U+2625 ANKH; \Ankh (marvosym)

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19744 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19745 % U+262F YIN YANG; \YinYang (marvosym)
19746 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19747 %* \textYinYang -> \Yinyang (marvosym)
19748 %* \textYinYang -> \YingYang (marvosym)
19749 %* \textYinYang -> \Yingyang (marvosym)
19750 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19751 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19752 %* \textfrownie -> \Frowny (marvosym)
19753 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19754 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19755 %* \textsmiley -> \Smiley (marvosym)
19756 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19757 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19758 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19759 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19760 %* \textsun -> \Sun (marvosym)
19761 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19762 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19763 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19764 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19765 % U+263F MERCURY; \mercury (wasysym)
19766 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19767 %* \textmercury -> \Mercury (marvosym)
19768 % U+2640 FEMALE SIGN; female; \female (wasysym)
19769 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19770 %* \textPUfemale -> \textfemale (tipx)
19771 %* \textPUfemale -> \female (wasysym)
19772 %* \textPUfemale -> \venus (wasysym)
19773 %* \textPUfemale -> \Venus (marvosym)
19774 %* \textPUfemale -> \Female (marvosym)
19775 % U+2641 EARTH; \earth (wasysym)
19776 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19777 %* \textearth -> \Earth (marvosym)
19778 % U+2642 MALE SIGN; male, mars; \male (wasysym)
19779 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19780 %* \textmale -> \mars (wasysym)
19781 %* \textmale -> \Mars (marvosym)
19782 %* \textmale -> \Male (marvosym)
19783 % U+2643 JUPITER; \jupiter (wasysym)
19784 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19785 %* \textjupiter -> \Jupiter (marvosym)
19786 % U+2644 SATURN; \saturn (wasysym)
19787 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19788 %* \textsaturn -> \Saturn (marvosym)
19789 % U+2645 URANUS; \uranus (wasysym)
19790 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19791 %* \texturanus -> \Uranus (marvosym)
19792 % U+2646 NEPTUNE; \neptune (wasysym)
19793 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19794 %* \textneptune -> \Neptune (marvosym)
19795 % U+2647 PLUTO; \pluto (wasysym)
19796 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19797 %* \textpluto -> \Pluto (marvosym)
19798 % U+2648 ARIES; \aries (wasysym)
19799 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19800 %* \textaries -> \Aries (marvosym)

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19801 % U+2649 TAURUS; \taurus (wasysym)
19802 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19803 %* \texttaurus -> \Taurus (marvosym)
19804 % U+264A GEMINI; \gemini (wasysym)
19805 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19806 %* \textgemini -> \Gemini (marvosym)
19807 % U+264B CANCER; \cancer (wasysym)
19808 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19809 %* \textcancer -> \Cancer (marvosym)
19810 % U+264C LEO; \leo (wasysym)
19811 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19812 %* \textleo -> \Leo (marvosym)
19813 % U+264D VIRGO; \virgo (wasysym)
19814 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19815 %* \textvirgo -> \Virgo (marvosym)
19816 % U+264E LIBRA; \libra (wasysym)
19817 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19818 %* \textlibra -> \Libra (marvosym)
19819 % U+264F SCORPIO; \scorpio (wasysym)
19820 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19821 %* \textscorpio -> \Scorpio (marvosym)
19822 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19823 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19824 %* \textsagittarius -> \Sagittarius (marvosym)
19825 % U+2651 CAPRICORN; \capricornus (wasysym)
19826 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19827 %* \textcapricornus -> \Capricorn (marvosym)
19828 % U+2652 AQUARIUS; \aquarius (wasysym)
19829 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19830 %* \textaquarius -> \Aquarius (marvosym)
19831 % U+2653 PISCES; \pisces (wasysym)
19832 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19833 %* \textpisces -> \Pisces (marvosym)
19834 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19835 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19836 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19837 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19838 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19839 %* \textheartsuitwhite -> \Heart (marvosym)
19840 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19841 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19842 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19843 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19844 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19845 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19846 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19847 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19848 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19849 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19850 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19851 % U+2666 BLACK DIAMOND SUIT; diamond
19852 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19853 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19854 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19855 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19856 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19857 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)

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19858 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19859 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19860 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19861 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}% U+266B
19862 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
19863 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}% U+266C
19864 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19865 \DeclareTextCommand{\textflat}{PU}{\9046\155}% U+266D
19866 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19867 \DeclareTextCommand{\textnatural}{PU}{\9046\156}% U+266E
19868 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19869 \DeclareTextCommand{\textsharp}{PU}{\9046\157}% U+266F
19870 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19871 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}% U+2672
19872 %* \textrecycle -> \Recycling (marvosym)
19873 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19874 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}% U+267F
19875 % U+2691 BLACK FLAG; \Flag (ifsym)
19876 \DeclareTextCommand{\textFlag}{PU}{\9046\221}% U+2691
19877 %* \textFlag -> \VarFlag (ifsym)
19878 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19879 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}% U+2692
19880 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19881 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}% U+2694
19882 %* \textdsmilitary -> \textxswup (fourier)
19883 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19884 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}% U+2695
19885 % U+2696 SCALES; \dsjuridical (dictsym)
19886 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}% U+2696
19887 % U+2697 ALEMBIC; \dschemical (dictsym)
19888 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}% U+2697
19889 % U+2698 FLOWER; \dsbiological (dictsym)
19890 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}% U+2698
19891 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
19892 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}% U+269A
19893 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
19894 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}% U+269D
19895 % U+26A0 WARNING SIGN; \danger (fourier)
19896 \DeclareTextCommand{\textdanger}{PU}{\9046\240}% U+26A0
19897 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
19898 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}% U+26A2
19899 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
19900 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}% U+26A3
19901 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-
vosym)
19902 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}% U+26A4
19903 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
19904 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}% U+26A5
19905 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
19906 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}% U+26AA
19907 % U+26AD MARRIAGE SYMBOL
19908 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
19909 % U+26AE DIVORCE SYMBOL
19910 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
19911 % U+26B2 NEUTER; \textuncrfemale (tipx)
19912 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2

19913 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19914 % U+26B9 SEXTILE; \hexstar (wasysym)
 19915 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19916 % U+26BD SOCCER BALL; \Football (marvosym)
 19917 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19918 %* \textSoccerBall -> \Football (marvosym)
 19919 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19920 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19921 % U+26C6 RAIN; \Rain (ifsym)
 19922 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19923 % U+26D4 NO ENTRY; \noway (fourier)
 19924 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19925 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19926 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19927 % U+26FA TENT; \Tent (ifsym)
 19928 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19929 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbling)
 19930 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19931 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19932 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19933 % U+2702 BLACK SCISSORS; \ScissorRight (bbling)
 19934 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19935 %* \textScissorRight -> \RightScissors (marvosym)
 19936 %* \textScissorRight -> \Leftscissors (marvosym)
 19937 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbling)
 19938 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19939 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbling)
 19940 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19941 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bbling)
 19942 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19943 % U+2707 TAPE DRIVE; \Tape (bbling)
 19944 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19945 % U+2708 AIRPLANE; \Plane (bbling)
 19946 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19947 % U+2709 ENVELOPE; \Envelope (bbling),
 19948 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19949 %* \textEnvelope -> \Letter (marvosym)
 19950 % U+270C VICTORY HAND; \Peace (bbling)
 19951 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19952 % U+270D WRITING HAND; \WritingHand (marvosym)
 19953 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19954 %* \textWritingHand -> \Writinghand (marvosym)
 19955 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bbling)
 19956 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19957 % U+270F PENCIL; \PencilRight (bbling)
 19958 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19959 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bbling)
 19960 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19961 % U+2711 WHITE NIB; \NibRight (bbling)
 19962 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19963 % U+2712 BLACK NIB; \NibSolidRight (bbling)
 19964 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19965 % U+2713 CHECK MARK; checkmark; \Checkmark (bbling)
 19966 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19967 %* \textCheckmark -> \checkmark (MnSymbol)

19968 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19969 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19970 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19971 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19972 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19973 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19974 % U+2717 BALLOT X; \XSolidBrush (bding)
 19975 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19976 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19977 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19978 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19979 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19980 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19981 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19982 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19983 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19984 % U+271D LATIN CROSS; \Cross (bding)
 19985 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19986 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19987 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19988 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19989 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19990 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19991 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19992 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19993 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19994 %* \textDavidStar -> \davidstar (wasysym)
 19995 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19996 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19997 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19998 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19999 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 20000 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 20001 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 20002 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 20003 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 20004 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 20005 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 20006 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 20007 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 20008 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 20009 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 20010 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 20011 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 20012 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 20013 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 20014 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 20015 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 20016 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 20017 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 20018 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 20019 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 20020 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 20021 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 20022 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 20023 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)

20024 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 20025 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 20026 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 20027 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 20028 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 20029 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 20030 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 20031 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 20032 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 20033 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 20034 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 20035 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 20036 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 20037 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 20038 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 20039 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 20040 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 20041 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 20042 % \SixFlowerOpenCenter (bding)
 20043 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 20044 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 20045 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 20046 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 20047 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 20048 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 20049 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 20050 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 20051 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 20052 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 20053 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 20054 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 20055 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 20056 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 20057 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 20058 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 20059 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 20060 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 20061 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 20062 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 20063 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 20064 % U+2747 SPARKLE; \Sparkle (bding)
 20065 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 20066 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 20067 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 20068 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 20069 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 20070 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20071 % \EightFlowerPetalRemoved (bding)
 20072 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 20073 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;

20074 % \EightAsterisk (bding)
 20075 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20076 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20077 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20078 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20079 % \SquareShadowBottomRight (bding)
 20080 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20081 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20082 % \SquareShadowTopRight (bding)
 20083 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 20084 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20085 % \SquareCastShadowBottomRight (bding)
 20086 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20087 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20088 % \SquareCastShadowTopRight (bding)
 20089 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20090 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bding)
 20091 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20092 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20093 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20094 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20095 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20096 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20097 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

20098 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20099 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20100 % \notperp (mathabx)
 20101 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20102 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20103 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20104 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20105 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20106 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20107 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20108 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20109 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20110 %* \textlbrackdbl -> \llbracket (stmaryrd)
 20111 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20112 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20113 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20114 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20115 % \circlearrowleft (AmS)
 20116 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20117 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20118 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20119 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20120 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20121 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20122 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 20123 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 20124 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 20125 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)

20126 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20127 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 20128 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20129 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 20130 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 20131 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20132 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20133 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 20134 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20135 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 20136 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20137 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 20138 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20139 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 20140 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20141 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
 20142 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 20143 % U+2924 NORTH EAST ARROW WITH HOOK; \hooknearrow (MnSymbol)
 20144 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 20145 % U+2925 SOUTH EAST ARROW WITH HOOK; \hooksearrow (MnSymbol)
 20146 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20147 % U+2926 SOUTH WEST ARROW WITH HOOK; \hookswarrow (MnSymbol)
 20148 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20149 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 20150 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 20151 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 20152 % \rcurvearrowne (MnSymbol)
 20153 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 20154 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 20155 % \lcurvearrowse (MnSymbol)
 20156 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 20157 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 20158 % \lcurvearrowsw (MnSymbol)
 20159 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 20160 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 20161 % \rcurvearrowse (MnSymbol)
 20162 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 20163 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 20164 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 20165 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 20166 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 20167 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 20168 % \rcurvearrowdown (MnSymbol)
 20169 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
 20170 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
 20171 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
 20172 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-

bol)

20173 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
 20174 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 20175 % \rcurvearrowright (MnSymbol)
 20176 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
 20177 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrightharpoon (mathabx)
 20178 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 20179 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightleftharpoon (mathabx)
 20180 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 20181 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 20182 % \updownharpoonrightleft (MnSymbol)
 20183 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 20184 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 20185 % \updownharpoonleftright (MnSymbol)
 20186 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 20187 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 20188 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 20189 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 20190 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 20191 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 20192 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 20193 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON
 20194 % WITH BARB DOWN; \rightrightharpoons (mathabx)
 20195 \DeclareTextCommand{\textrightrightharpoons}{PU}{\9051\144}%* U+2964
 20196 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
 20197 % WITH BARB RIGHT; \downdownharpoons (mathabx)
 20198 \DeclareTextCommand{\textdowndownharpoons}{PU}{\9051\145}%* U+2965
 20199 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20200 % \leftbarharpoon (mathabx)
 20201 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20202 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20203 % LONG DASH; \barleftharpoon (mathabx)
 20204 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20205 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20206 % LONG DASH; \rightbarharpoon (mathabx)
 20207 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20208 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20209 % LONG DASH; \barrightharpoon (mathabx)
 20210 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20211 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON
 20212 % WITH BARB RIGHT; \updownharpoons (mathabx)
 20213 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 20214 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON
 20215 % WITH BARB RIGHT; \downupharpoons (mathabx)
 20216 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 20217 % U+297F DOWN FISH TAIL
 20218 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20219 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 20220 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987

20221 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 20222 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 20223 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 20224 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 20225 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 20226 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 20227 %* \textobar -> \textvarobar (stmaryrd)
 20228 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 20229 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 20230 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 20231 %* \textobslash -> \obackslash (mathabx)
 20232 %* \textobslash -> \varobslash (stmaryrd)
 20233 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 20234 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 20235 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 20236 %* \textobot -> \odplus (ulsy)
 20237 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (marvosym)
 20238 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 20239 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 20240 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 20241 %* \textolessthan -> \varolessthan (stmaryrd)
 20242 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 20243 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 20244 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 20245 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 20246 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 20247 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 20248 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 20249 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 20250 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 20251 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 20252 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 20253 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 20254 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 20255 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 20256 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 20257 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 20258 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 20259 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 20260 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20261 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 20262 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 20263 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 20264 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 20265 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 20266 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 20267 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts, pxfonts, wasysym)
 20268 % \Join (latexsym, amsfonts, amssymb, mathabx, txfonts, pxfonts, wasysym)
 20269 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 20270 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 20271 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 20272 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 20273 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 20274 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)

20275 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 20276 %* \textminusdot -> \divdot (mathabx)
 20277 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 20278 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 20279 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 20280 % \dtimes (mathdesign)
 20281 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 20282 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20283 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20284 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20285 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20286 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20287 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20288 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20289 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20290 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20291 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20292 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20293 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20294 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20295 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20296 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20297 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 20298 %* \textdoublevee -> \merge (stmaryrd)
 20299 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20300 % \doublebarwedge (AmS)
 20301 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20302 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20303 % \veedoublebar (mahtabx)
 20304 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
 20305 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20306 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20307 % \neqdot (MnSymbol)
 20308 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20309 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20310 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20311 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20312 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20313 % \nleqslant (txfonts/pxfonts)
 20314 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20315 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20316 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 20317 % \ngeqslant (txfonts/pxfonts)
 20318 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20319 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20320 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20321 % \nlessapprox (txfonts/pxfonts)
 20322 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20323 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20324 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20325 % \ngtrapprox (txfonts/pxfonts)
 20326 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20327 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20328 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 20329 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20330 % \gneq (AmS)
 20331 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88

20332 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20333 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20334 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20335 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20336 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 THAN;
 20337 % \lesseqqgtr (AmS)
 20338 \DeclareTextCommand{\textlesseqqgtr}{PU}{\9052\213}%* U+2A8B
 20339 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 THAN;
 20340 % \gtreqqless (AmS)
 20341 \DeclareTextCommand{\textgtreqqless}{PU}{\9052\214}%* U+2A8C
 20342 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20343 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20344 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20345 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20346 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20347 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20348 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20349 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20350 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 Symbol)
 20351 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20352 % \npreceq (txfonts/pxfonts)
 20353 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20354 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 Symbol)
 20355 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20356 % \nsucceq (txfonts/pxfonts)
 20357 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 20358 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \precneq (mathabx)
 20359 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20360 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succneq (mathabx)
 20361 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20362 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20363 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20364 % \npreceqq (txfonts/pxfonts)
 20365 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20366 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20367 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20368 % \nsucceqq (txfonts/pxfonts)
 20369 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20370 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20371 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20372 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20373 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20374 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20375 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20376 % \nprecapprox (txfonts/pxfonts)
 20377 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20378 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20379 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20380 % \nsuccapprox (txfonts/pxfonts)
 20381 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20382 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-

prox (AmS)
20383 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
20384 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
prox (AmS)
20385 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
20386 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
20387 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
20388 % \nsubseteqq (txfonts/pxfonts, mathabx)
20389 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
20390 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
20391 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
20392 % \nsupseteqq (mathabx)
20393 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
20394 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
20395 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
20396 %* \textdashV -> \leftVdash (MnSymbol)
20397 % \ndashV (mathabx)
20398 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
20399 %* \textndashV -> \nleftVdash (MnSymbol)
20400 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
20401 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
20402 %* \textDashv -> \leftmodels (MnSymbol)
20403 % \nDashv (mathabx)
20404 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
20405 %* \textnDashv -> \nleftmodels (MnSymbol)
20406 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
20407 % \DashV (mathabx)
20408 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
20409 %* \textDashV -> \leftModels (MnSymbol)
20410 % \nDashV (mathabx)
20411 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
20412 %* \textnDashV -> \nleftModels (MnSymbol)
20413 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
20414 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
20415 % \ndownmodels (MnSymbol)
20416 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
20417 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
20418 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
20419 % \nupmodels (MnSymbol)
20420 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
20421 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
20422 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
20423 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
20424 % \interleave (stmaryrd)
20425 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
20426 % U+2AFD DOUBLE SOLIDUS OPERATOR; \slash (stmaryrd)
20427 \DeclareTextCommand{\textslash}{PU}{\9052\375}%* U+2AFD
20428 %* \textslash -> \varparallel (txfonts/pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20429 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
20430 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
20431 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
20432 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20433 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J

20434 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20435 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
20436 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
20437 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
20438 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
20439 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
20440 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20441 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
20442 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
20443 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
20444 % \textdownstep (tipa)
20445 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20446 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
20447 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
20448 %* \textPUheng -> \textheng (tipx)
20449 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
20450 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
20451 %* \textPULhookfour -> \textlhookfour (tipx)
20452 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
20453 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
20454 %* \textPUscf -> \textscf (tipx)
20455 % U+A735 LATIN SMALL LETTER AO; \textao (tipx)
20456 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
20457 %* \textPUaolig -> \textao (tipx)
20458 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
20459 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
20460 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
20461 \DeclareTextCommand{\textcircumlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20462 % U+FB01 LATIN SMALL LIGATURE FI; fi
20463 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
20464 % U+FB02 LATIN SMALL LIGATURE FL; fl
20465 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20466 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
20467 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
20468 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
20469 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
20470 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
20471 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
20472 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
20473 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
20474 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
20475 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
20476 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
20477 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
20478 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
20479 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
20480 %* \textfullnote -> \Ganz (harmony)

20481 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20482 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20483 %* \texthalfnote -> \Halb (harmony)
 20484 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20485 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20486 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20487 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20488 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20489 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20490 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20491 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20492 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20493 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20494 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20495 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20496 % U+1F468 MAN; \ManFace (marvosym)
 20497 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20498 % U+1F469 WOMAN; \WomanFace (marvosym)
 20499 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20500 %* \textWomanFace -> \Womanface (marvosym)
 20501 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20502 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20503 %* \textFax -> \Faxmachine (marvosym)
 20504 % U+1F525 FIRE; \Fire (ifsym)
 20505 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20506 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 20507 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 20508 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 20509 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 20510 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 20511 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20512 \DeclareTextCommand{\SS}{PU}{SS}%
 20513 % \textcopyleft (textcomp)
 20514 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 20515 % \ccnc (ccllicenses)
 20516 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 20517 % \ccnd (ccllicenses)
 20518 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
 20519 % \ccsa (ccllicenses)
 20520 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
 20521 % \Info (marvosym, china2e)
 20522 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
 20523 % \CESign (marvosym)
 20524 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
 20525 %* \textCESign -> \CESign (marvosym)

51.2.46 Aliases

Aliases (german.sty)

20526 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
 20527 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
 20528 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%


```

20529 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20530 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20531 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20532 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20533 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

Aliases (math names)

20534 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20535 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20536 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20537 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20538 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*

20539 \puenc)

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20540 (*puvnenc)

20541 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20542 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20543 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20544 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20545 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20546 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20547 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20548 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20549 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20550 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20551 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20552 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF

20553 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20554 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20555 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
20556 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20557 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
20558 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
20559 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
20560 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
20561 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
20562 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
20563 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
20564 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
20565 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
20566 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
20567 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
20568 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
20569 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
20570 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
20571 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
20572 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
20573 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
20574 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
20575 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
20576 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
20577 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
20578 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED

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20579 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20580 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20581 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20582 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20583 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20584 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20585 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20586 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20587 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20588 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20589 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20590 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20591 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20592 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20593 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20594 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20595 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20596 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20597 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20598 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20599 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20600 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20601 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20602 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20603 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20604 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20605 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20606 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20607 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20608 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20609 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20610 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20611 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20612 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20613 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20614 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20615 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20616 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20617 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20618 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20619 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20620 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20621 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20622 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20623 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20624 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20625 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20626 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20627 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20628 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20629 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20630 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20631 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20632 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20633 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20634 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20635 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0

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20636 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
20637 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
20638 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
20639 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
20640 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
20641 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
20642 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
20643 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
20644 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
20645 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
20646 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
20647 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
20648 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
20649 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
20650 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
20651 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
20652 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
20653 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
20654 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
20655 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
20656 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
20657 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
20658 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
20659 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
20660 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
20661 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
20662 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
20663 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
20664 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
20665 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
20666 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20667 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20668 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20669 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20670 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
20671 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20672 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20673 </puvnenc>

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20674 (*puarenc)

20675 % U+0621;afii57409;ARABIC LETTER HAMZA
20676 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20677 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20678 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20679 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20680 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20681 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20682 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20683 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20684 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20685 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20686 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20687 % U+0627;afii57415;ARABIC LETTER ALEF

```

20688 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
 20689 % U+0628;afii57416;ARABIC LETTER BEH
 20690 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
 20691 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
 20692 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
 20693 % U+062A;afii57418;ARABIC LETTER TEH
 20694 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
 20695 % U+062B;afii57419;ARABIC LETTER THEH
 20696 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
 20697 % U+062C;afii57420;ARABIC LETTER JEEM
 20698 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
 20699 % U+062D;afii57421;ARABIC LETTER HAH
 20700 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
 20701 % U+062E;afii57422;ARABIC LETTER KHAH
 20702 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
 20703 % U+062F;afii57423;ARABIC LETTER DAL
 20704 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
 20705 % U+0630;afii57424;ARABIC LETTER THAL
 20706 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 20707 % U+0631;afii57425;ARABIC LETTER REH
 20708 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 20709 % U+0632;afii57426;ARABIC LETTER ZAIN
 20710 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 20711 % U+0633;afii57427;ARABIC LETTER SEEN
 20712 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20713 % U+0634;afii57428;ARABIC LETTER SHEEN
 20714 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20715 % U+0635;afii57429;ARABIC LETTER SAD
 20716 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20717 % U+0636;afii57430;ARABIC LETTER DAD
 20718 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20719 % U+0637;afii57431;ARABIC LETTER TAH
 20720 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20721 % U+0638;afii57432;ARABIC LETTER ZAH
 20722 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20723 % U+0639;afii57433;ARABIC LETTER AIN
 20724 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20725 % U+063A;afii57434;ARABIC LETTER GHAIN
 20726 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20727 % U+0640;afii57440;ARABIC TATWEEL
 20728 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20729 % U+0641;afii57441;ARABIC LETTER FEH
 20730 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20731 % U+0642;afii57442;ARABIC LETTER QAF
 20732 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20733 % U+0643;afii57443;ARABIC LETTER KAF
 20734 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20735 % U+0644;afii57444;ARABIC LETTER LAM
 20736 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20737 % U+0645;afii57445;ARABIC LETTER MEEM
 20738 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20739 % U+0646;afii57446;ARABIC LETTER NOON
 20740 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20741 % U+0647;afii57470;ARABIC LETTER HEH
 20742 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20743 % U+0648;afii57448;ARABIC LETTER WAW
 20744 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648

20745 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20746 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20747 % U+064A;afii57450;ARABIC LETTER YEH
 20748 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20749 % U+064B;afii57451;ARABIC FATHATAN
 20750 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20751 % U+064C;afii57452;ARABIC DAMMATAN
 20752 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20753 % U+064D;afii57453;ARABIC KASRATAN
 20754 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20755 % U+064E;afii57454;ARABIC FATHA
 20756 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20757 % U+064F;afii57455;ARABIC DAMMA
 20758 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20759 % U+0650;afii57456;ARABIC KASRA
 20760 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20761 % U+0651;afii57457;ARABIC SHADDA
 20762 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20763 % U+0652;afii57458;ARABIC SUKUN
 20764 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20765 % U+067E ARABIC LETTER PEH; afii57506
 20766 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20767 % U+0686 ARABIC LETTER TCHEH; afii57507
 20768 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20769 % U+0698 ARABIC LETTER JEH; afii57508
 20770 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20771 % U+06A9 ARABIC LETTER KEHEH
 20772 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20773 % U+06AF ARABIC LETTER GAF; afii57509
 20774 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20775 % U+06CC ARABIC LETTER FARSI YEH
 20776 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20777 % U+200C ZERO WIDTH NON-JOINER; afii61664
 20778 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20779 % U+200D ZERO WIDTH JOINER; afii301
 20780 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D
 20781 (/puarenc)
 20782 <*psdextra>
 20783 \Hy@VersionCheck{psdextra.def}
 20784 \newcommand*{\psdmapshortnames}{%
 20785 \let\MVPlus\textMVPlus
 20786 \let\MVComma\textMVComma
 20787 \let\MVMinus\textMVMinus
 20788 \let\MVPeriod\textMVPeriod
 20789 \let\MVDivision\textMVDivision
 20790 \let\MVZero\textMVZero
 20791 \let\MVOne\textMVOne
 20792 \let\MVTwo\textMVTwo
 20793 \let\MVThree\textMVThree
 20794 \let\MVFour\textMVFour
 20795 \let\MVFive\textMVFive
 20796 \let\MVSix\textMVSix
 20797 \let\MVSeven\textMVSeven
 20798 \let\MVEight\textMVEight

20799 \let\MVNine\textMVNine
 20800 \let\MVAt\textMVAt
 20801 \let\copyright\textcopyright
 20802 \let\twosuperior\texttwosuperior
 20803 \let\threesuperior\textthreesuperior
 20804 \let\onesuperior\textonesuperior
 20805 \let\Thorn\textThorn
 20806 \let\thorn\textthorn
 20807 \let\hbar\texthbar
 20808 \let\hausA\texthausA
 20809 \let\hausD\texthausD
 20810 \let\hausK\texthausK
 20811 \let\barl\textbarl
 20812 \let\inve\textinve
 20813 \let\slashc\textslashc
 20814 \let\scripta\textscripta
 20815 \let\openo\textopeno
 20816 \let\rtaild\textrtaild
 20817 \let\reve\textreve
 20818 \let\schwa\textschwa
 20819 \let\niepsilon\textniepsilon
 20820 \let\repsilon\textrepsilon
 20821 \let\rhookrepsilon\text\rhookrepsilon
 20822 \let\scriptg\textscriptg
 20823 \let\scg\textscg
 20824 \let\ipagamma\textipagamma
 20825 \let\babygamma\textbabygamma
 20826 \let\bari\textbari
 20827 \let\niiota\textniiota
 20828 \let\sci\textsci
 20829 \let\scn\textscn
 20830 \let\niphi\textniphi
 20831 \let\longleg\textlongleg
 20832 \let\scr\textscr
 20833 \let\invscr\textinvscr
 20834 \let\esh\textesh
 20835 \let\baru\textbaru
 20836 \let\niupsilon\textniupsilon
 20837 \let\scriptv\textscriptv
 20838 \let\turnv\textturnv
 20839 \let\turnw\textturnw
 20840 \let\turny\textturny
 20841 \let\scy\textscy
 20842 \let\yogh\textyogh
 20843 \let\glotstop\textglotstop
 20844 \let\revglotstop\textrevglotstop
 20845 \let\invglotstop\textinvglotstop
 20846 \let\Gamma\textGamma
 20847 \let\Delta\textDelta
 20848 \let\Theta\textTheta
 20849 \let\Lambda\textLambda
 20850 \let\Xi\textXi
 20851 \let\Pi\textPi
 20852 \let\Sigma\textSigma
 20853 \let\Upsilon\textUpsilon
 20854 \let\Phi\textPhi
 20855 \let\Psi\textPsi

20856 \let\Omega\textOmega
 20857 \let\alpha\textalpha
 20858 \let\beta\textbeta
 20859 \let\gamma\textgamma
 20860 \let\delta\textdelta
 20861 \let\epsilon\textepsilon
 20862 \let\zeta\textzeta
 20863 \let\eta\texteta
 20864 \let\theta\texttheta
 20865 \let\iota\textiota
 20866 \let\kappa\textkappa
 20867 \let\lambda\textlambda
 20868 \let\mu\textmu
 20869 \let\mugreek\textmugreek
 20870 \let\nu\textnu
 20871 \let\xi\textxi
 20872 \let\pi\textpi
 20873 \let\rho\rho
 20874 \let\varsigma\textvarsigma
 20875 \let\sigma\textsigma
 20876 \let\tau\texttau
 20877 \let\upsilon\textupsilon
 20878 \let\phi\textphi
 20879 \let\chi\textchi
 20880 \let\psi\textpsi
 20881 \let\omega\textomega
 20882 \let\scd\textscd
 20883 \let\scu\textscu
 20884 \let\iinferior\textiinferior
 20885 \let\rinferior\extrinferior
 20886 \let\uiinferior\textuiinferior
 20887 \let\vinferior\textvinferior
 20888 \let\betainferior\textbetainferior
 20889 \let\gammainferior\textgammainferior
 20890 \let\rhoinferior\textrhoinferior
 20891 \let\phiinferior\textphiinferior
 20892 \let\chiinferior\textchiinferior
 20893 \let\barsci\textbarsci
 20894 \let\barp\textbarp
 20895 \let\barscu\textbarscu
 20896 \let\htrtaild\texthtrtaild
 20897 \let\dagger\textdagger
 20898 \let\bullet\textbullet
 20899 \let\hdotfor\texthdotfor
 20900 \let\prime\textprime
 20901 \let\second\textsecond
 20902 \let\third\textthird
 20903 \let\backprime\textbackprime
 20904 \let\lefttherefore\textlefttherefore
 20905 \let\fourth\textfourth
 20906 \let\diamonddots\textdiamonddots
 20907 \let\zerosuperior\textzerosuperior
 20908 \let\isuperior\textisuperior
 20909 \let\foursuperior\textfoursuperior
 20910 \let\fivesuperior\textfivesuperior
 20911 \let\sixsuperior\textsixsuperior
 20912 \let\sevensuperior\textsevensuperior

20913 \let\eightssuperior\texteightssuperior
 20914 \let\ninesuperior\textninesuperior
 20915 \let\plussuperior\textplussuperior
 20916 \let\minussuperior\textminussuperior
 20917 \let\equalsuperior\textequalsuperior
 20918 \let\parenleftssuperior\textparenleftssuperior
 20919 \let\parenrightssuperior\textparenrightssuperior
 20920 \let\NSSuperior\textNSSuperior
 20921 \let\zeroinferior\textzeroinferior
 20922 \let\oneinferior\textoneinferior
 20923 \let\twoinferior\texttwoinferior
 20924 \let\threeinferior\textthreeinferior
 20925 \let\fourinferior\textfourinferior
 20926 \let\fiveinferior\textfiveinferior
 20927 \let\sixinferior\textsixinferior
 20928 \let\seveninferior\textseveninferior
 20929 \let\eightinferior\texteightinferior
 20930 \let\nineinferior\textnineinferior
 20931 \let\plusinferior\textplusinferior
 20932 \let\minusinferior\textminusinferior
 20933 \let\equalsinferior\textequalsinferior
 20934 \let\parenleftinferior\textparenleftinferior
 20935 \let\parenrightinferior\textparenrightinferior
 20936 \let\ainferior\textainferior
 20937 \let\eginferior\texteginferior
 20938 \let\oinferior\textoinferior
 20939 \let\xinferior\textxinferior
 20940 \let\schwainferior\textschwainferior
 20941 \let\hinferior\texthinferior
 20942 \let\kinferior\textkinferior
 20943 \let\linferior\textlinferior
 20944 \let\minferior\textminferior
 20945 \let\ninferior\textnninferior
 20946 \let\pinferior\textpinferior
 20947 \let\sinferior\textsinferior
 20948 \let\tinferior\texttinferior
 20949 \let\Deleatur\textDeleatur
 20950 \let\hslash\texthslash
 20951 \let\Im\textIm
 20952 \let\ell\textell
 20953 \let\wp\textwp
 20954 \let\Re\textRe
 20955 \let\mho\textmho
 20956 \let\riota\textriota
 20957 \let\Finv\textFinv
 20958 \let\aleph\textaleph
 20959 \let\beth\textbeth
 20960 \let\gimel\textgimel
 20961 \let\daleth\textdaleth
 20962 \let\xfax\textfax
 20963 \let\Game\textGame
 20964 \let\leftarrow\textleftarrow
 20965 \let\uparrow\textuparrow
 20966 \let\rightarrow\textrightarrow
 20967 \let\downarrow\textdownarrow
 20968 \let\leftrightarrow\textleftrightarrow
 20969 \let\updownarrow\textupdownarrow

20970 `\let\nwarrow\textnwarrow`
 20971 `\let\nearrow\textnearrow`
 20972 `\let\searrow\textsearrow`
 20973 `\let\swarrow\textswarrow`
 20974 `\let\nleftarrow\textnleftarrow`
 20975 `\let\nrightarrow\textnrightarrow`
 20976 `\let\twoheadleftarrow\texttwoheadleftarrow`
 20977 `\let\ntwoheadleftarrow\textntwoheadleftarrow`
 20978 `\let\twoheaduparrow\texttwoheaduparrow`
 20979 `\let\twoheadrightarrow\texttwoheadrightarrow`
 20980 `\let\ntwoheadrightarrow\textntwoheadrightarrow`
 20981 `\let\twoheaddownarrow\texttwoheaddownarrow`
 20982 `\let\leftarrowtail\textleftarrowtail`
 20983 `\let\rightarrowtail\textrightarrowtail`
 20984 `\let\mapsto\textmapsto`
 20985 `\let\hookleftarrow\texthookleftarrow`
 20986 `\let\hookrightarrow\texthookrightarrow`
 20987 `\let\looparrowleft\textlooparrowleft`
 20988 `\let\looparrowright\textlooparrowright`
 20989 `\let\nlefttriarightarrow\textnlefttriarightarrow`
 20990 `\let\lightning\textlightning`
 20991 `\let\dlsh\textdlsh`
 20992 `\let\curvearrowleft\textcurvearrowleft`
 20993 `\let\curvearrowright\textcurvearrowright`
 20994 `\let\leftharpoonup\textleftharpoonup`
 20995 `\let\leftharpoondown\textleftharpoondown`
 20996 `\let\upharpoonright\textupharpoonright`
 20997 `\let\upharpoonleft\textupharpoonleft`
 20998 `\let\rightharpoonup\text\rightharpoonup`
 20999 `\let\rightharpoondown\text\rightharpoondown`
 21000 `\let\downharpoonright\textdownharpoonright`
 21001 `\let\downharpoonleft\textdownharpoonleft`
 21002 `\let\rightleftarrows\textrightleftarrows`
 21003 `\let\updownarrows\textupdownarrows`
 21004 `\let\leftrightarrows\textleftrightarrows`
 21005 `\let\leftleftarrows\textleftleftarrows`
 21006 `\let\upuparrows\textupuparrows`
 21007 `\let\righttrightarrows\textrighttrightarrows`
 21008 `\let\downdownarrows\textdowndownarrows`
 21009 `\let\leftrightharpoons\textleftrightharpoons`
 21010 `\let\rightleftharpoons\textrightleftharpoons`
 21011 `\let\NLeftarrow\textNLeftarrow`
 21012 `\let\NLeftrightarrow\textNLeftrightarrow`
 21013 `\let\NRrightarrow\textNRrightarrow`
 21014 `\let\Leftarrow\textLeftarrow`
 21015 `\let\Uparrow\textUparrow`
 21016 `\let\Rightarrow\textRightarrow`
 21017 `\let\Downarrow\textDownarrow`
 21018 `\let\Leftrightarrow\textLeftrightarrow`
 21019 `\let\Updownarrow\textUpdownarrow`
 21020 `\let\Nwarrow\textNwarrow`
 21021 `\let\Nearrow\textNearrow`
 21022 `\let\searrow\textsearrow`
 21023 `\let\swarrow\textswarrow`
 21024 `\let\Lleftarrow\textLleftarrow`
 21025 `\let\Rrightarrow\textRrightarrow`
 21026 `\let\leftsquigarrow\textleftsquigarrow`

21027 `\let\rightsquigarrow\textrightsquigarrow`
 21028 `\let\dashleftarrow\textdashleftarrow`
 21029 `\let\dasheduparrow\textdasheduparrow`
 21030 `\let\dashrightarrow\textdashrightarrow`
 21031 `\let\dasheddownarrow\textdasheddownarrow`
 21032 `\let\pointer\textpointer`
 21033 `\let\downuparrows\textdownuparrows`
 21034 `\let\leftarrowtriangle\textleftarrowtriangle`
 21035 `\let\rightarrowtriangle\textrightarrowtriangle`
 21036 `\let\leftrightarrowtriangle\textleftrightarrowtriangle`
 21037 `\let\forall\textforall`
 21038 `\let\complement\textcomplement`
 21039 `\let\partial\textpartial`
 21040 `\let\exists\textexists`
 21041 `\let\nexists\textnexists`
 21042 `\let\emptyset\textemptyset`
 21043 `\let\triangle\texttriangle`
 21044 `\let\nabla\textnabla`
 21045 `\let\in\textin`
 21046 `\let\notin\textnotin`
 21047 `\let\smallin\textsmallin`
 21048 `\let\ni\textni`
 21049 `\let\notowner\textnotowner`
 21050 `\let\smallowns\textsmallowns`
 21051 `\let\prod\textprod`
 21052 `\let\amalg\textamalg`
 21053 `\let\sum\textsum`
 21054 `\let\mp\textmp`
 21055 `\let\dotplus\textdotplus`
 21056 `\let\Divides\textDivides`
 21057 `\let\DividesNot\textDividesNot`
 21058 `\let\setminus\textsetminus`
 21059 `\let\ast\textast`
 21060 `\let\circ\textcirc`
 21061 `\let\surd\textsurd`
 21062 `\let\propto\textpropto`
 21063 `\let\infty\textinfty`
 21064 `\let\angle\textangle`
 21065 `\let\measuredangle\textmeasuredangle`
 21066 `\let\sphericalangle\textsphericalangle`
 21067 `\let\mid\textmid`
 21068 `\let\nmid\textnmid`
 21069 `\let\parallel\textparallel`
 21070 `\let\nparallel\textnparallel`
 21071 `\let\wedge\textwedge`
 21072 `\let\owedge\textowedge`
 21073 `\let\vee\textvee`
 21074 `\let\ovee\textovee`
 21075 `\let\cap\textcap`
 21076 `\let\cup\textcup`
 21077 `\let\int\textint`
 21078 `\let\iint\textiint`
 21079 `\let\iiint\textiiint`
 21080 `\let\oint\textoint`
 21081 `\let\oiint\textoiint`
 21082 `\let\ointclockwise\textointclockwise`
 21083 `\let\ointctrclockwise\textointctrclockwise`

21084 \let\therefore\texttherefore
 21085 \let\because\textbecause
 21086 \let\vdotdot\textvdotdot
 21087 \let\squaredots\textsquaredots
 21088 \let\dotminus\textdotminus
 21089 \let\eqcolon\texteqcolon
 21090 \let\sim\textsim
 21091 \let\backsim\textbacksim
 21092 \let\backsim\textnbacksim
 21093 \let\wr\textwr
 21094 \let\nsim\textnsim
 21095 \let\eqsim\texteqsim
 21096 \let\neqsim\textneqsim
 21097 \let\simeq\textsimeq
 21098 \let\nsimeq\textnsimeq
 21099 \let\cong\textcong
 21100 \let\ncong\textncong
 21101 \let\approx\textapprox
 21102 \let\approx\textnapprox
 21103 \let\approxeq\textapproxeq
 21104 \let\approxeq\textnapproxeq
 21105 \let\triplesim\texttriplesim
 21106 \let\triplesim\textntriplesim
 21107 \let\backcong\textbackcong
 21108 \let\backcong\textnbackcong
 21109 \let\asymp\textasymp
 21110 \let\asymp\textnasymp
 21111 \let\Bumpeq\textBumpeq
 21112 \let\Bumpeq\textnBumpeq
 21113 \let\bumpeq\textbumpeq
 21114 \let\bumpeq\textnbumpeq
 21115 \let\doteq\textdoteq
 21116 \let\doteq\textndoteq
 21117 \let\doteqdot\textdoteqdot
 21118 \let\doteqdot\textndoteqdot
 21119 \let\fallingdoteq\textfallingdoteq
 21120 \let\fallingdoteq\textnfallingdoteq
 21121 \let\risingdoteq\textrisingdoteq
 21122 \let\risingdoteq\textnrisingdoteq
 21123 \let\colonequals\textcolonequals
 21124 \let\equalscolon\textequalscolon
 21125 \let\eqcirc\texteqcirc
 21126 \let\neqcirc\textneqcirc
 21127 \let\circeq\textcirceq
 21128 \let\circeq\textncirceq
 21129 \let\hateq\texthateq
 21130 \let\hateq\textnhateq
 21131 \let\triangleeq\texttriangleeq
 21132 \let\neq\textneq
 21133 \let\ne\textne
 21134 \let\equiv\textequiv
 21135 \let\equiv\textnequiv
 21136 \let\leq\textleq
 21137 \let\le\textle
 21138 \let\geq\textgeq
 21139 \let\ge\textge
 21140 \let\leqq\textleqq

21141 $\backslash\text{nleqq}\backslash\text{textnleqq}$
 21142 $\backslash\text{leqq}\backslash\text{textgeqq}$
 21143 $\backslash\text{ngeqq}\backslash\text{textngeqq}$
 21144 $\backslash\text{lneqq}\backslash\text{textlneqq}$
 21145 $\backslash\text{gneqq}\backslash\text{textgneqq}$
 21146 $\backslash\text{ll}\backslash\text{textll}$
 21147 $\backslash\text{nll}\backslash\text{textnll}$
 21148 $\backslash\text{gg}\backslash\text{textgg}$
 21149 $\backslash\text{ngg}\backslash\text{textngg}$
 21150 $\backslash\text{between}\backslash\text{textbetween}$
 21151 $\backslash\text{nless}\backslash\text{textnless}$
 21152 $\backslash\text{ngtr}\backslash\text{textngtr}$
 21153 $\backslash\text{nleq}\backslash\text{textnleq}$
 21154 $\backslash\text{ngeq}\backslash\text{textngeq}$
 21155 $\backslash\text{lesssim}\backslash\text{textlesssim}$
 21156 $\backslash\text{gtrsim}\backslash\text{textgtrsim}$
 21157 $\backslash\text{nlesssim}\backslash\text{textnlesssim}$
 21158 $\backslash\text{ngtrsim}\backslash\text{textngtrsim}$
 21159 $\backslash\text{lessgtr}\backslash\text{textlessgtr}$
 21160 $\backslash\text{gtrless}\backslash\text{textgtrless}$
 21161 $\backslash\text{ngtrless}\backslash\text{textngtrless}$
 21162 $\backslash\text{nlessgtr}\backslash\text{textnlessgtr}$
 21163 $\backslash\text{prec}\backslash\text{textprec}$
 21164 $\backslash\text{succ}\backslash\text{textsucc}$
 21165 $\backslash\text{preccurlyeq}\backslash\text{textpreccurlyeq}$
 21166 $\backslash\text{succcurlyeq}\backslash\text{textsucccurlyeq}$
 21167 $\backslash\text{precsim}\backslash\text{textprecsim}$
 21168 $\backslash\text{nprecsim}\backslash\text{textnprecsim}$
 21169 $\backslash\text{succsim}\backslash\text{textsuccsim}$
 21170 $\backslash\text{nsuccsim}\backslash\text{textnsuccsim}$
 21171 $\backslash\text{nprec}\backslash\text{textnprec}$
 21172 $\backslash\text{nsucc}\backslash\text{textnsucc}$
 21173 $\backslash\text{subset}\backslash\text{textsubset}$
 21174 $\backslash\text{supset}\backslash\text{textsupset}$
 21175 $\backslash\text{nsubset}\backslash\text{textnsubset}$
 21176 $\backslash\text{nsupset}\backslash\text{textnsupset}$
 21177 $\backslash\text{subseteq}\backslash\text{textsubseteq}$
 21178 $\backslash\text{supseteq}\backslash\text{textsupseteq}$
 21179 $\backslash\text{nsubseteq}\backslash\text{textnsubseteq}$
 21180 $\backslash\text{nsupseteq}\backslash\text{textnsupseteq}$
 21181 $\backslash\text{subsetneq}\backslash\text{textsubsetneq}$
 21182 $\backslash\text{supsetneq}\backslash\text{textsupsetneq}$
 21183 $\backslash\text{cupdot}\backslash\text{textcupdot}$
 21184 $\backslash\text{cupplus}\backslash\text{textcupplus}$
 21185 $\backslash\text{sqsubset}\backslash\text{textsqssubset}$
 21186 $\backslash\text{nsqsubset}\backslash\text{textnsqsubset}$
 21187 $\backslash\text{sqsupset}\backslash\text{textsqsupset}$
 21188 $\backslash\text{nsqsupset}\backslash\text{textnsqsupset}$
 21189 $\backslash\text{sqsubseq}\backslash\text{textsqssubseq}$
 21190 $\backslash\text{nsqsubseq}\backslash\text{textnsqsubseq}$
 21191 $\backslash\text{sqsupseq}\backslash\text{textsqsupseq}$
 21192 $\backslash\text{nsqsupseq}\backslash\text{textnsqsupseq}$
 21193 $\backslash\text{sqcap}\backslash\text{textsqqcap}$
 21194 $\backslash\text{sqcup}\backslash\text{textsqqcup}$
 21195 $\backslash\text{oplus}\backslash\text{textoplus}$
 21196 $\backslash\text{ominus}\backslash\text{textominus}$
 21197 $\backslash\text{otimes}\backslash\text{textotimes}$

21198 $\backslash\text{oslash}$
 21199 $\backslash\text{odot}$
 21200 $\backslash\text{circledcirc}$
 21201 $\backslash\text{circledast}$
 21202 $\backslash\text{circleddash}$
 21203 $\backslash\text{boxplus}$
 21204 $\backslash\text{boxminus}$
 21205 $\backslash\text{boxtimes}$
 21206 $\backslash\text{boxdot}$
 21207 $\backslash\text{vdash}$
 21208 $\backslash\text{dashv}$
 21209 $\backslash\text{ndashv}$
 21210 $\backslash\text{top}$
 21211 $\backslash\text{ndownvdash}$
 21212 $\backslash\text{bot}$
 21213 $\backslash\text{nupvdash}$
 21214 $\backslash\text{vDash}$
 21215 $\backslash\text{Vdash}$
 21216 $\backslash\text{Vvdash}$
 21217 $\backslash\text{nVdash}$
 21218 $\backslash\text{VDash}$
 21219 $\backslash\text{nvDash}$
 21220 $\backslash\text{nvDash}$
 21221 $\backslash\text{nVdash}$
 21222 $\backslash\text{nVDash}$
 21223 $\backslash\text{lhs}$
 21224 $\backslash\text{rhs}$
 21225 $\backslash\text{unlhs}$
 21226 $\backslash\text{unrhs}$
 21227 $\backslash\text{multimapdotbothA}$
 21228 $\backslash\text{multimapdotbothB}$
 21229 $\backslash\text{multimap}$
 21230 $\backslash\text{veebar}$
 21231 $\backslash\text{barwedge}$
 21232 $\backslash\text{star}$
 21233 $\backslash\text{divideontimes}$
 21234 $\backslash\text{bowtie}$
 21235 $\backslash\text{ltimes}$
 21236 $\backslash\text{rtimes}$
 21237 $\backslash\text{leftthreetimes}$
 21238 $\backslash\text{rightthreetimes}$
 21239 $\backslash\text{backsimeq}$
 21240 $\backslash\text{nbacksimeq}$
 21241 $\backslash\text{curlyvee}$
 21242 $\backslash\text{curlywedge}$
 21243 $\backslash\text{Subset}$
 21244 $\backslash\text{nSubset}$
 21245 $\backslash\text{Supset}$
 21246 $\backslash\text{nSupset}$
 21247 $\backslash\text{Cap}$
 21248 $\backslash\text{Cup}$
 21249 $\backslash\text{pitchfork}$
 21250 $\backslash\text{lessdot}$
 21251 $\backslash\text{gtrdot}$
 21252 $\backslash\text{lll}$
 21253 $\backslash\text{ggg}$
 21254 $\backslash\text{lesseqgtr}$

21255 \let\gtreqless\textgtreqless
 21256 \let\curlyeqprec\textcurlyeqprec
 21257 \let\ncurlyeqprec\textncurlyeqprec
 21258 \let\curlyeqsucc\textcurlyeqsucc
 21259 \let\ncurlyeqsucc\textncurlyeqsucc
 21260 \let\preccurlyeq\textnpreccurlyeq
 21261 \let\nsucccurlyeq\textnsucccurlyeq
 21262 \let\sqsubseteq\textnqsubseteq
 21263 \let\sqsupseteq\textnqsupseteq
 21264 \let\sqsubsetneq\textsqsubsetneq
 21265 \let\sqsupsetneq\textsqsupsetneq
 21266 \let\lnsim\textlnsim
 21267 \let\gnsim\textgnsim
 21268 \let\precnsim\textprecnsim
 21269 \let\succnsim\textsuccnsim
 21270 \let\triangleleft\texttriangleleft
 21271 \let\triangleright\texttriangleright
 21272 \let\trianglelefteq\texttrianglelefteq
 21273 \let\trianglerighteq\texttrianglerighteq
 21274 \let\vdots\textvdots
 21275 \let\cdots\textcdots
 21276 \let\udots\textudots
 21277 \let\ddots\textddots
 21278 \let\barin\textbarin
 21279 \let\diameter\textdiameter
 21280 \let\backneg\textbackneg
 21281 \let\wasylounge\textwasylounge
 21282 \let\invbackneg\textinvbackneg
 21283 \let\clock\textclock
 21284 \let\ulcorner\textulcorner
 21285 \let\urcorner\texturcorner
 21286 \let\llcorner\textllcorner
 21287 \let\lrcorner\textlrcorner
 21288 \let\frown\textfrown
 21289 \let\smile\textsmile
 21290 \let\Keyboard\textKeyboard
 21291 \let\langle\textlangle
 21292 \let\rangle\textrangle
 21293 \let\APLinv\textAPLinv
 21294 \let\Tumbler\textTumbler
 21295 \let\notslash\textnotslash
 21296 \let\notbackslash\textnotbackslash
 21297 \let\boxbackslash\textboxbackslash
 21298 \let\APLleftarrowbox\textAPLleftarrowbox
 21299 \let\APLrightarrowbox\textAPLrightarrowbox
 21300 \let\APLuparrowbox\textAPLuparrowbox
 21301 \let\APLdownarrowbox\textAPLdownarrowbox
 21302 \let\APLinput\textAPLinput
 21303 \let\Request\textRequest
 21304 \let\Beam\textBeam
 21305 \let\hexagon\texthexagon
 21306 \let\APLbox\textAPLbox
 21307 \let\ForwardToIndex\textForwardToIndex
 21308 \let\RewindToIndex\textRewindToIndex
 21309 \let\bbslash\textbbslash
 21310 \let\CircledA\textCircledA
 21311 \let\CleaningF\textCleaningF

21312 \let\CleaningFF\textCleaningFF
 21313 \let\CleaningP\textCleaningP
 21314 \let\CleaningPP\textCleaningPP
 21315 \let\CuttingLine\textCuttingLine
 21316 \let\UParrow\textUParrow
 21317 \let\bigtriangleup\textbigtriangleup
 21318 \let\Forward\textForward
 21319 \let\triangleright\texttriangleright
 21320 \let\RHD\textRHD
 21321 \let\DOWNarrow\textDOWNarrow
 21322 \let\bigtriangledown\textbigtriangledown
 21323 \let\Rewind\textRewind
 21324 \let\triangleleft\texttriangleleft
 21325 \let\LHD\textLHD
 21326 \let\diamond\textdiamond
 21327 \let\lozenge\textlozenge
 21328 \let\LEFTCIRCLE\textLEFTCIRCLE
 21329 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21330 \let\openbullet\textopenbullet
 21331 \let\boxbar\textboxbar
 21332 \let\bigcircle\textbigcircle
 21333 \let\Cloud\textCloud
 21334 \let\FiveStar\textFiveStar
 21335 \let\FiveStarOpen\textFiveStarOpen
 21336 \let\Phone\textPhone
 21337 \let\boxempty\textboxempty
 21338 \let\Checkedbox\textCheckedbox
 21339 \let\Crossedbox\textCrossedbox
 21340 \let\Coffeecup\textCoffeecup
 21341 \let\HandCuffLeft\textHandCuffLeft
 21342 \let\HandCuffRight\textHandCuffRight
 21343 \let\HandLeft\textHandLeft
 21344 \let\HandRight\textHandRight
 21345 \let\Radioactivity\textRadioactivity
 21346 \let\Biohazard\textBiohazard
 21347 \let\Ankh\textAnkh
 21348 \let\YinYang\textYinYang
 21349 \let\frownie\textfrownie
 21350 \let\smiley\textsmiley
 21351 \let\blacksmiley\textblacksmiley
 21352 \let\sun\textsun
 21353 \let\leftmoon\textleftmoon
 21354 \let\rightmoon\textrightmoon
 21355 \let\mercury\textmercury
 21356 \let\earth\textearth
 21357 \let\male\textmale
 21358 \let\jupiter\textjupiter
 21359 \let\saturn\textsaturn
 21360 \let\uranus\texturanus
 21361 \let\neptune\textneptune
 21362 \let\pluto\textpluto
 21363 \let\aries\textaries
 21364 \let\taurus\texttaurus
 21365 \let\gemini\textgemini
 21366 \let\cancer\textcancer
 21367 \let\leo\textleo
 21368 \let\virgo\textvirgo

21369 \let\libra\textlibra
 21370 \let\scorpio\textscorpio
 21371 \let\sagittarius\textsagittarius
 21372 \let\capricornus\textcapricornus
 21373 \let\aquarius\textaquarius
 21374 \let\pisces\textpisces
 21375 \let\quarternote\textquarternote
 21376 \let\twonotes\texttwonotes
 21377 \let\sixteenthnote\textsixteenthnote
 21378 \let\flat\textflat
 21379 \let\natural\textnatural
 21380 \let\sharp\textsharp
 21381 \let\recycle\textrecycle
 21382 \let\Wheelchair\textWheelchair
 21383 \let\Flag\textFlag
 21384 \let\MineSign\textMineSign
 21385 \let\ds military\textds military
 21386 \let\ds medical\textds medical
 21387 \let\ds juridical\textds juridical
 21388 \let\ds chemical\textds chemical
 21389 \let\ds biological\textds biological
 21390 \let\ds commercial\textds commercial
 21391 \let\manstar\textmanstar
 21392 \let\danger\textdanger
 21393 \let\FemaleFemale\textFemaleFemale
 21394 \let\MaleMale\textMaleMale
 21395 \let\FemaleMale\textFemaleMale
 21396 \let\Hermaphrodite\textHermaphrodite
 21397 \let\Neutral\textNeutral
 21398 \let\hexstar\texthexstar
 21399 \let\SunCloud\textSunCloud
 21400 \let\Rain\textRain
 21401 \let\noway\textnoway
 21402 \let\Mountain\textMountain
 21403 \let\Tent\textTent
 21404 \let\ScissorRight\textScissorRight
 21405 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21406 \let\ScissorHollowRight\textScissorHollowRight
 21407 \let\PhoneHandset\textPhoneHandset
 21408 \let\Tape\textTape
 21409 \let\Plane\textPlane
 21410 \let\Envelope\textEnvelope
 21411 \let\Peace\textPeace
 21412 \let\WritingHand\textWritingHand
 21413 \let\PencilRightDown\textPencilRightDown
 21414 \let\PencilRight\textPencilRight
 21415 \let\PencilRightUp\textPencilRightUp
 21416 \let\NibRight\textNibRight
 21417 \let\NibSolidRight\textNibSolidRight
 21418 \let\Checkmark\textCheckmark
 21419 \let\CheckmarkBold\textCheckmarkBold
 21420 \let\XSolid\textXSolid
 21421 \let\XSolidBold\textXSolidBold
 21422 \let\XSolidBrush\textXSolidBrush
 21423 \let\PlusOutline\textPlusOutline
 21424 \let\Plus\textPlus
 21425 \let\PlusThinCenterOpen\textPlusThinCenterOpen

21426 \let\PlusCenterOpen\textPlusCenterOpen
 21427 \let\Cross\textCross
 21428 \let\CrossOpenShadow\textCrossOpenShadow
 21429 \let\CrossOutline\textCrossOutline
 21430 \let\CrossMaltese\textCrossMaltese
 21431 \let\DavidStar\textDavidStar
 21432 \let\FourAsterisk\textFourAsterisk
 21433 \let\JackStar\textJackStar
 21434 \let\JackStarBold\textJackStarBold
 21435 \let\ClowerTips\textClowerTips
 21436 \let\FourStar\textFourStar
 21437 \let\FourStarOpen\textFourStarOpen
 21438 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21439 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21440 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21441 \let\FiveStarOutline\textFiveStarOutline
 21442 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21443 \let\FiveStarConvex\textFiveStarConvex
 21444 \let\FiveStarShadow\textFiveStarShadow
 21445 \let\AsteriskBold\textAsteriskBold
 21446 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21447 \let\EightStarTaper\textEightStarTaper
 21448 \let\EightStarConvex\textEightStarConvex
 21449 \let\SixStar\textSixStar
 21450 \let\EightStar\textEightStar
 21451 \let\EightStarBold\textEightStarBold
 21452 \let\TwelveStar\textTwelveStar
 21453 \let\SixteenStarLight\textSixteenStarLight
 21454 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21455 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21456 \let\Asterisk\textAsterisk
 21457 \let\SixFlowerAlternate\textSixFlowerAlternate
 21458 \let\FiveFlowerPetal\textFiveFlowerPetal
 21459 \let\FiveFlowerOpen\textFiveFlowerOpen
 21460 \let\EightFlowerPetal\textEightFlowerPetal
 21461 \let\SunshineOpenCircled\textSunshineOpenCircled
 21462 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21463 \let\SnowflakeChevron\textSnowflakeChevron
 21464 \let\Snowflake\textSnowflake
 21465 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21466 \let\Sparkle\textSparkle
 21467 \let\SparkleBold\textSparkleBold
 21468 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21469 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21470 \let\EightAsterisk\textEightAsterisk
 21471 \let\CircleShadow\textCircleShadow
 21472 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21473 \let\SquareTopRight\textSquareTopRight
 21474 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21475 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21476 \let\DiamandSolid\textDiamandSolid
 21477 \let\RectangleThin\textRectangleThin
 21478 \let\Rectangle\textRectangle
 21479 \let\RectangleBold\textRectangleBold
 21480 \let\perp\textperp
 21481 \let\notperp\textnotperp
 21482 \let\veedot\textveedot

21483 \let\wedgedot\textwedgedot
 21484 \let\leftspoon\textleftspoon
 21485 \let\lbrackdbl\textlbrackdbl
 21486 \let\rbrackdbl\textrbrackdbl
 21487 \let\circlearrowleft\textcirclearrowleft
 21488 \let\circlearrowright\textcirclearrowright
 21489 \let\longleftarrow\textlongleftarrow
 21490 \let\longrightarrow\textlongrightarrow
 21491 \let\longleftarrow\textlongleftarrow
 21492 \let\Longleftarrow\textLongleftarrow
 21493 \let\Longrightarrow\textLongrightarrow
 21494 \let\Longleftarrow\textLongleftarrow
 21495 \let\longmapsto\textlongmapsto
 21496 \let\Longmapsfrom\textLongmapsfrom
 21497 \let\Longmapsto\textLongmapsto
 21498 \let\nwsearrow\textnwsearrow
 21499 \let\neswarrow\textneswarrow
 21500 \let\hookrightarrow\texthookrightarrow
 21501 \let\rhookrightarrow\texthookrightarrow
 21502 \let\hookrightarrow\texthookrightarrow
 21503 \let\rhookrightarrow\texthookrightarrow
 21504 \let\leadsto\textleadsto
 21505 \let\curvearrowright\textcurvearrowright
 21506 \let\curvearrowleft\textcurvearrowleft
 21507 \let\curvearrowright\textcurvearrowright
 21508 \let\curvearrowright\textcurvearrowright
 21509 \let\curvearrowright\textcurvearrowright
 21510 \let\curvearrowright\textcurvearrowright
 21511 \let\curvearrowright\textcurvearrowright
 21512 \let\curvearrowright\textcurvearrowright
 21513 \let\lefttharpoonup\textlefttharpoonup
 21514 \let\righttharpoonup\textrighttharpoonup
 21515 \let\updownharpoonright\textupdownharpoonright
 21516 \let\updownharpoonleft\textupdownharpoonleft
 21517 \let\lefttharpoons\textlefttharpoons
 21518 \let\upharpoonright\textupharpoonright
 21519 \let\righttharpoons\textrighttharpoons
 21520 \let\downharpoonright\textdownharpoonright
 21521 \let\leftbarharpoon\textleftbarharpoon
 21522 \let\barlefttharpoon\textbarlefttharpoon
 21523 \let\rightbarharpoon\textrightbarharpoon
 21524 \let\barrighttharpoon\textbarrighttharpoon
 21525 \let\updownharpoons\textupdownharpoons
 21526 \let\downupharpoons\textdownupharpoons
 21527 \let\moo\textmoo
 21528 \let\llparenthesis\textllparenthesis
 21529 \let\rrparenthesis\textrrparenthesis
 21530 \let\invdiameter\textinvdiameter
 21531 \let\obar\textobar
 21532 \let\obslash\textobslash
 21533 \let\obot\textobot
 21534 \let\NoChemicalCleaning\textNoChemicalCleaning
 21535 \let\olessthan\textolessthan
 21536 \let\ogreaterthan\textogreaterthan
 21537 \let\boxslash\textboxslash
 21538 \let\boxbslash\textboxbslash
 21539 \let\boxast\textboxast

21540 `\let\boxcircle\textboxcircle`
 21541 `\let\boxbox\textboxbox`
 21542 `\let\Valve\textValve`
 21543 `\let\multimapboth\textmultimapboth`
 21544 `\let\shuffle\textshuffle`
 21545 `\let\uplus\textuplus`
 21546 `\let\bigdoublewedge\textbigdoublewedge`
 21547 `\let\bigdoublevee\textbigdoublevee`
 21548 `\let\Join\textJoin`
 21549 `\let\fatsemi\textfatsemi`
 21550 `\let\circplus\textcircplus`
 21551 `\let\minusdot\textminusdot`
 21552 `\let\dotimes\textdotimes`
 21553 `\let\dtimes\textdtimes`
 21554 `\let\odiv\textodiv`
 21555 `\let\invneg\textinvneg`
 21556 `\let\squaredoublecap\textsquaredoublecap`
 21557 `\let\capdot\textcapdot`
 21558 `\let\squaredoublecup\textsquaredoublecup`
 21559 `\let\doublewedge\textdoublewedge`
 21560 `\let\doublevee\textdoublevee`
 21561 `\let\doublebarwedge\textdoublebarwedge`
 21562 `\let\veedoublebar\textveedoublebar`
 21563 `\let\eqdot\texteqdot`
 21564 `\let\neqdot\textneqdot`
 21565 `\let\coloncolonequals\textcoloncolonequals`
 21566 `\let\leqslant\textleqslant`
 21567 `\let\nleqslant\textnleqslant`
 21568 `\let\geqslant\textgeqslant`
 21569 `\let\ngeqslant\textngeqslant`
 21570 `\let\lessapprox\textlessapprox`
 21571 `\let\nlessapprox\textnlessapprox`
 21572 `\let\gtrapprox\textgtrapprox`
 21573 `\let\ngtrapprox\textngtrapprox`
 21574 `\let\lneq\textlneq`
 21575 `\let\gneq\textgneq`
 21576 `\let\lnapprox\textlnapprox`
 21577 `\let\gnapprox\textgnapprox`
 21578 `\let\lesseqqgtr\textlesseqqgtr`
 21579 `\let\gtreqqless\textgtreqqless`
 21580 `\let\eqslantless\texteqslantless`
 21581 `\let\eqslantgtr\texteqslantgtr`
 21582 `\let\leftslice\textleftslice`
 21583 `\let\rightslice\textright slice`
 21584 `\let\preceq\textpreceq`
 21585 `\let\npreceq\textnpreceq`
 21586 `\let\succeq\textsucceq`
 21587 `\let\nsucceq\textnsucceq`
 21588 `\let\precneq\textprecneq`
 21589 `\let\succneq\textsuccneq`
 21590 `\let\preceqq\textpreceqq`
 21591 `\let\npreceqq\textnpreceqq`
 21592 `\let\succeqq\textsucceqq`
 21593 `\let\nsucceqq\textnsucceqq`
 21594 `\let\precneqq\textprecneqq`
 21595 `\let\succneqq\textsuccneqq`
 21596 `\let\precapprox\textprecapprox`

21597 \let\nprecapprox\textnprecapprox
 21598 \let\succapprox\textsuccapprox
 21599 \let\nsuccapprox\textnsuccapprox
 21600 \let\precnapprox\textprecnapprox
 21601 \let\succnapprox\textsuccnapprox
 21602 \let\subseteqq\textsubseteqq
 21603 \let\subsetseteqq\textsubsetseteqq
 21604 \let\supseteqq\textsupseteqq
 21605 \let\supsetseteqq\textsupsetseteqq
 21606 \let\dashV\textdashV
 21607 \let\ndashV\textndashV
 21608 \let\Dashv\textDashv
 21609 \let\ndashv\textndashv
 21610 \let\DashV\textDashV
 21611 \let\ndashV\textndashV
 21612 \let\downmodels\textdownmodels
 21613 \let\ndownmodels\textndownmodels
 21614 \let\upmodels\textupmodels
 21615 \let\nupmodels\textnupmodels
 21616 \let\upspoon\textupspoon
 21617 \let\interleave\textinterleave
 21618 \let\sslash\textsslash
 21619 \let\pentagon\textpentagon
 21620 \let\varhexagon\textvarhexagon
 21621 \let\jinferior\textjinferior
 21622 \let\slashdiv\textslashdiv
 21623 \let\fivedots\textfivedots
 21624 \let\oo\textoo
 21625 \let\GaPa\textGaPa
 21626 \let\HaPa\textHaPa
 21627 \let\ViPa\textViPa
 21628 \let\AcPa\textAcPa
 21629 \let\SePa\textSePa
 21630 \let\ZwPa\textZwPa
 21631 \let\fullnote\textfullnote
 21632 \let\halfnote\texthalfnote
 21633 \let\Vier\textVier
 21634 \let\Acht\textAcht
 21635 \let\Sech\textSech
 21636 \let\Zwdr\textZwdr
 21637 \let\Mundus\textMundus
 21638 \let\Moon\textMoon
 21639 \let\ManFace\textManFace
 21640 \let\WomanFace\textWomanFace
 21641 \let\Fax\textFax
 21642 \let\Fire\textFire
 21643 \let\Bicycle\textBicycle
 21644 \let\Gentsroom\textGentsroom
 21645 \let\Ladiesroom\textLadiesroom
 21646 \let\ccnc\textccnc
 21647 \let\ccsa\textccsa
 21648 \let\Info\textInfo
 21649 \let\CESign\textCESign
 21650 \let\neg\textneg
 21651 \let\times\texttimes
 21652 \let\div\textdiv
 21653 \let\pm\textpm

21654 \let\cdot\textcdot
 21655 }% \psdmapshortnames
 21656 \newcommand*{\psdaliasnames}{%
 21657 \let\epsdice\HyPsd@DieFace
 21658 \let\fcdice\HyPsd@DieFace
 21659 \let\MoonPha\HyPsd@MoonPha
 21660 \let\mathdollar\textdollar
 21661 \let\EyesDollar\textdollar
 21662 \let\binampersand\textampersand
 21663 \let\with\textampersand
 21664 \let\mathunderscore\textunderscore
 21665 \let\textvertline\textbar
 21666 \let\mathsterling\textsterling
 21667 \let\pounds\textsterling
 21668 \let\brokenvert\textbrokenbar
 21669 \let\mathsection\textsection
 21670 \let\S\textsection
 21671 \let\mathparagraph\textparagraph
 21672 \let\MultiplicationDot\textperiodcentered
 21673 \let\Squaredot\textperiodcentered
 21674 \let\vartimes\textmultiply
 21675 \let\MVMultiplication\textmultiply
 21676 \let\eth\dh
 21677 \let\crossd\textcrd
 21678 \let\textbard\textcrd
 21679 \let\bard\textcrd
 21680 \let\textcrh\texthbar
 21681 \let\crossh\texthbar
 21682 \let\planck\texthbar
 21683 \let\eng\ng
 21684 \let\engma\ng
 21685 \let\crossb\textcrb
 21686 \let\textbarb\textcrb
 21687 \let\barb\textcrb
 21688 \let\Florin\textflorin
 21689 \let\hv\texthvlig
 21690 \let\hausak\texthtk
 21691 \let\crossnilambda\textcrlambda
 21692 \let\barlambda\textcrlambda
 21693 \let\lambdabar\textcrlambda
 21694 \let\lambdaslash\textcrlambda
 21695 \let\textnrleg\textPUnrleg
 21696 \let\textpipevar\textpipe
 21697 \let\textdoublepipevar\textdoublepipe
 21698 \let\textdoublebarpipevar\textdoublebarpipe
 21699 \let\textcrg\textgslash
 21700 \let\textdblig\textPUdblig
 21701 \let\textqplig\textPUqplig
 21702 \let\textcentoldstyle\textslashc
 21703 \let\textbarc\textslashc
 21704 \let\inva\textturna
 21705 \let\vara\textscripta
 21706 \let\invscripta\textturnscripta
 21707 \let\rotvara\textturnscripta
 21708 \let\hookb\texthtb
 21709 \let\hausab\texthtb
 21710 \let\varopeno\textopeno

21711 \let\curlyc\textctc
 21712 \let\taild\textrtaild
 21713 \let\hookd\texthtd
 21714 \let\hausad\texthtd
 21715 \let\er\textrhooschwa
 21716 \let\epsi\textniepsilon
 21717 \let\hookrepsilon\textrhooschwa
 21718 \let\closedrepsilon\textcloseepsilon
 21719 \let\barj\textbardotlessj
 21720 \let\hookg\texthtg
 21721 \let\varg\textscriptg
 21722 \let\vod\textipagamma
 21723 \let\invh\textturnh
 21724 \let\udesc\textturnh
 21725 \let\hookh\textthh
 21726 \let\voicedh\textthh
 21727 \let\hookheng\textthheng
 21728 \let\ibar\textbari
 21729 \let\vari\textniota
 21730 \let\tildel\textltilde
 21731 \let\latfric\textbeltl
 21732 \let\tail\textrtail
 21733 \let\lz\textlyoghlig
 21734 \let\invm\textturnm
 21735 \let\rotm\textturnm
 21736 \let\legm\textturnmrlg
 21737 \let\labdentalnas\textltailm
 21738 \let\emgma\textltailm
 21739 \let\nj\textltailn
 21740 \let\enya\textltailn
 21741 \let\tailn\textrtailn
 21742 \let\closedniomega\textcloseomega
 21743 \let\varomega\textcloseomega
 21744 \let\invr\textturnr
 21745 \let\rotr\textturnr
 21746 \let\invlegr\textturnlonglegr
 21747 \let\tailinvr\textturnrrtail
 21748 \let\legr\textlonglegr
 21749 \let\tailr\textrtailr
 21750 \let\flapr\textfishhookr
 21751 \let\flap\textfishhookr
 21752 \let\tails\textrtails
 21753 \let\curlyesh\textctesh
 21754 \let\clickt\textturnt
 21755 \let\tailt\textrtailt
 21756 \let\ubar\textbaru
 21757 \let\rotOmega\textniupsilon
 21758 \let\invv\textturnv
 21759 \let\pwedge\textturnv
 21760 \let\invw\textturnw
 21761 \let\rotw\textturnw
 21762 \let\invy\textturny
 21763 \let\roty\textturny
 21764 \let\tailz\textrtailz
 21765 \let\curlyz\textctz
 21766 \let\curlyyogh\textctyogh
 21767 \let\ejective\textglotstop

21768 \let\glottal\textglotstop
 21769 \let\reveject\textrevglotstop
 21770 \let\clickc\textstretchc
 21771 \let\textstretchcvar\textstretchc
 21772 \let\clickb\textbullseye
 21773 \let\textObullseye\textbullseye
 21774 \let\textctjvar\textctj
 21775 \let\textturnsck\textturnk
 21776 \let\dz\textdzlig
 21777 \let\tesh\textteshlig
 21778 \let\digamma\textdigammagreek
 21779 \let\hardsign\cyrhrdsn
 21780 \let\softsign\cyrsoftsn
 21781 \let\hebsin\hebshin
 21782 \let\textsck\textPUsc
 21783 \let\textscm\textPUscm
 21784 \let\textscp\textPUscp
 21785 \let\textrevscr\textPUrevscr
 21786 \let\textrhooca\textPURhooca
 21787 \let\textrhooke\textPURhooke
 21788 \let\textrhookepsilon\textPURhookepsilon
 21789 \let\texthookopeno\textPURhookopeno
 21790 \let\textdoublevertline\textbardbl
 21791 \let\dag\textdagger
 21792 \let\ddagger\textdaggerdbl
 21793 \let\ddag\textdaggerdbl
 21794 \let\mathellipsis\textellipsis
 21795 \let\EurDig\texteuro
 21796 \let\EURdig\texteuro
 21797 \let\EurHv\texteuro
 21798 \let\EURhv\texteuro
 21799 \let\EurCr\texteuro
 21800 \let\EURcr\texteuro
 21801 \let\EurTm\texteuro
 21802 \let\EURtm\texteuro
 21803 \let\Eur\texteuro
 21804 \let\Denarius\textDeleatur
 21805 \let\agemO\textmho
 21806 \let\EstimatedSign\textestimated
 21807 \let\Ecommerce\textestimated
 21808 \let\bindnasrepma\textinvamp
 21809 \let\parr\textinvamp
 21810 \let\MVRightArrow\textrightarrow
 21811 \let\MVRightarrow\textrightarrow
 21812 \let\MVArrowDown\textdownarrow
 21813 \let\Force\textdownarrow
 21814 \let\textglobrise\textnearrow
 21815 \let\textglobfall\textsearrow
 21816 \let\Lightning\textlightning
 21817 \let\Conclusion\textRightarrow
 21818 \let\dashedleftarrow\textdashleftarrow
 21819 \let\dashedrightarrow\textdashrightarrow
 21820 \let\varnothing\textemptyset
 21821 \let\owns\textni
 21822 \let\notni\textnotowner
 21823 \let\varprop\textpropto
 21824 \let\varangle\textsphericalangle

21825 \let\Anglesign\textsphericalangle
 21826 \let\AngleSign\textsphericalangle
 21827 \let\notdivides\textnmid
 21828 \let\varowedge\textowedge
 21829 \let\varovee\textovee
 21830 \let\varint\textint
 21831 \let\varoint\textoint
 21832 \let\downtherefore\textbecause
 21833 \let\textdotdiv\textdotminus
 21834 \let\AC\textsim
 21835 \let\wreath\textwr
 21836 \let\nthickapprox\textnapprox
 21837 \let\VHF\texttriplesim
 21838 \let\notasymp\textnasymp
 21839 \let\Doteq\textdoteqdot
 21840 \let\corresponds\texthateq
 21841 \let\Corresponds\texthateq
 21842 \let\nequal\textneq
 21843 \let\Congruent\textequiv
 21844 \let\NotCongruent\textnequiv
 21845 \let\notequiv\textnequiv
 21846 \let\LessOrEqual\textleq
 21847 \let\LargerOrEqual\textgeq
 21848 \let\apprle\textlessim
 21849 \let\apprge\textgtrsim
 21850 \let\varoplus\textoplus
 21851 \let\varominus\textominus
 21852 \let\varotimes\textotimes
 21853 \let\varoslash\textoslash
 21854 \let\varodot\textodot
 21855 \let\ocirc\textcircledcirc
 21856 \let\varocircle\textcircledcirc
 21857 \let\varoast\textcircledast
 21858 \let\oasterisk\textcircledast
 21859 \let\rightvdash\textvdash
 21860 \let\leftvdash\textdashv
 21861 \let\leftvdash\textndashv
 21862 \let\downvdash\texttop
 21863 \let\upvdash\textbot
 21864 \let\perp\textnupvdash
 21865 \let\models\textvDash
 21866 \let\rightmodels\textvDash
 21867 \let\rightVdash\textVdash
 21868 \let\rightModels\textVDash
 21869 \let\rightvdash\textnvdash
 21870 \let\rightmodels\textnvDash
 21871 \let\models\textnvDash
 21872 \let\rightVdash\textnVdash
 21873 \let\rightModels\textnVDash
 21874 \let\lessclosed\textlhd
 21875 \let\gtrclosed\textrhd
 21876 \let\leqclosed\textunlhd
 21877 \let\trianglelefteq\textunlhd
 21878 \let\geqclosed\textunrhd
 21879 \let\trianglerighteq\textunrhd
 21880 \let\Bowtie\textbowtie
 21881 \let\varcurlyvee\textcurlyvee

21882 \let\varcurlywedge\textcurlywedge
 21883 \let\doublecap\textCap
 21884 \let\doublecup\textCup
 21885 \let\varsqsubsetneq\textsqsubsetneq
 21886 \let\varsqsupsetneq\textsqsupsetneq
 21887 \let\nlessclosed\textntriangleleft
 21888 \let\ngtrclosed\textntriangleright
 21889 \let\Clocklogo\textclock
 21890 \let\ClockLogo\textclock
 21891 \let\baro\textstmaryrdbaro
 21892 \let\varparallelinv\textbbslash
 21893 \let\CleaningA\textCircledA
 21894 \let\Kutline\textCuttingLine
 21895 \let\CutLine\textCuttingLine
 21896 \let\Cutline\textCuttingLine
 21897 \let\MoveUp\textUParrow
 21898 \let\APLup\textbigtriangleup
 21899 \let\Bleech\textbigtriangleup
 21900 \let\MoveDown\textDOWNarrow
 21901 \let\APLdown\textbigtriangledown
 21902 \let\Diamond\textdiamond
 21903 \let\varbigcirc\textbigcircle
 21904 \let\Telefon\textPhone
 21905 \let\Box\textboxempty
 21906 \let\CheckedBox\textCheckedbox
 21907 \let\XBox\textCrossedbox
 21908 \let\CrossedBox\textCrossedbox
 21909 \let\rightpointleft\textHandLeft
 21910 \let\leftpointright\textHandRight
 21911 \let\PointingHand\textHandRight
 21912 \let\Pointinghand\textHandRight
 21913 \let\Radiation\textRadioactivity
 21914 \let\Yinyang\textYinYang
 21915 \let\YingYang\textYinYang
 21916 \let\Yingyang\textYinYang
 21917 \let\Frowny\textfrownie
 21918 \let\Smiley\textsmiley
 21919 \let\Sun\textsun
 21920 \let\Mercury\textmercury
 21921 \let\textfemale\textPUfemale
 21922 \let\female\textPUfemale
 21923 \let\venus\textPUfemale
 21924 \let\Venus\textPUfemale
 21925 \let\Female\textPUfemale
 21926 \let\Earth\textearth
 21927 \let\mars\textmale
 21928 \let\Mars\textmale
 21929 \let\Male\textmale
 21930 \let\Jupiter\textjupiter
 21931 \let\Saturn\textsaturn
 21932 \let\Uranus\texturanus
 21933 \let\Neptune\textneptune
 21934 \let\Pluto\textpluto
 21935 \let\Aries\textaries
 21936 \let\Taurus\texttaurus
 21937 \let\Gemini\textgemini
 21938 \let\Cancer\textcancer

21939 \let\Leo\textleo
 21940 \let\Virgo\textvirgo
 21941 \let\Libra\textlibra
 21942 \let\Scorpio\textscorpio
 21943 \let\Sagittarius\textsagittarius
 21944 \let\Capricorn\textcapricornus
 21945 \let\Aquarius\textaquarius
 21946 \let\Pisces\textpisces
 21947 \let\spadesuit\textspadesuitblack
 21948 \let\Heart\textheartsuitwhite
 21949 \let\heartsuit\textheartsuitwhite
 21950 \let\diamondsuit\textdiamondsuitwhite
 21951 \let\clubsuit\textclubsuitblack
 21952 \let\eighthnote\textmusicalnote
 21953 \let\Recycling\textrecycle
 21954 \let\VarFlag\textFlag
 21955 \let\textxswup\textdsmilitary
 21956 \let\textuncrfemale\textPUuncrfemale
 21957 \let\Football\textSoccerBall
 21958 \let\CutLeft\textScissorRightBrokenBottom
 21959 \let\Cutright\textScissorRightBrokenBottom
 21960 \let\RightScissors\textScissorRight
 21961 \let\Leftscissors\textScissorRight
 21962 \let\Letter\textEnvelope
 21963 \let\Writinghand\textWritingHand
 21964 \let\checkmark\textCheckmark
 21965 \let\davidstar\textDavidStar
 21966 \let\llbracket\textlbrackdbl
 21967 \let\rrbracket\textrrbrackdbl
 21968 \let\RightTorque\textlcurvearrowdown
 21969 \let\Righttorque\textlcurvearrowdown
 21970 \let\LeftTorque\textrcurvearrowdown
 21971 \let\Lefttorque\textrcurvearrowdown
 21972 \let\textvarobar\textobar
 21973 \let\circledbslash\textobslash
 21974 \let\obackslash\textobslash
 21975 \let\varobslash\textobslash
 21976 \let\odplus\textobot
 21977 \let\varolessthan\textolessthan
 21978 \let\varogreaterthan\textogreaterthan
 21979 \let\divdot\textminusdot
 21980 \let\doublesqcap\textsqddoublecap
 21981 \let\doublesqcup\textsqddoublecup
 21982 \let\merge\textdoublevee
 21983 \let\leftVdash\textdashV
 21984 \let\nleftVdash\textndashV
 21985 \let\leftmodels\textDashv
 21986 \let\nleftmodels\textnDashv
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