

Hypertext marks in L^AT_EX

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<https://github.com/ho-tex/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 (also available as text file).

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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3 File hyccheck.tex

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

```
1 \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               \csname ver@\HyC@package.sty\endcsname
39             }}
```

```

40 }%
41 }

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```


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

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

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

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

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

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

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

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

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

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

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

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

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

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

162 % *****
163 </check>

164 <*package>

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

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

`\Hy@SetCatcodes`

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

`\Hy@RestoreCatcodes`

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

```

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

```

```

231 \Hy@SetCatcodes

```

It needs the December 95 release of L^AT_EX, because it uses `\protected@write`, and it defines commands in options; and the page setup internal code changed at that point. It'll probably break with the later releases!

Use package `hobsub-hyperref` for faster package loading.

```

232 \IfFileExists{hobsub-hyperref.sty}{%
233 \RequirePackage{hobsub-hyperref}[2011/01/30]%
234 }{}

235 \RequirePackage{ltxcmds}[2010/11/12]
236 \RequirePackage{ifpdf}[2006/02/20]
237 \RequirePackage{pdftexcmds}[2009/04/10]
238 \@ifpackagelater{pdftexcmds}{2010/11/04}{%}{%
239 \ltx@ifUndefined{pdfdraftmode}{%
240 \let\pdf@ifdraftmode\ltx@secondoftwo
241 }{%
242 \ifpdf
243 \def\pdf@ifdraftmode{%
244 \ifnum\pdfdraftmode=\ltx@one
245 \expandafter\ltx@firstoftwo
246 \else
247 \expandafter\ltx@secondoftwo
248 \fi
249 }%
250 \else
251 \let\pdf@ifdraftmode\ltx@secondoftwo
252 \fi
253 }%
254 }

255 \RequirePackage{infwarerr}[2010/04/08]
256 \RequirePackage{keyval}[1997/11/10]
257 \RequirePackage{kvsetkeys}[2007/09/29]
258 \RequirePackage{kvdefinekeys}[2011/04/07]
259 \RequirePackage{pdfescape}[2007/11/11]
260 \RequirePackage{ifvtex}

```

```

261 \RequirePackage{ifxetex}[2006/08/21]
262 \RequirePackage{hycolor}
263 \RequirePackage{letltxmacro}[2008/06/13]
264 \RequirePackage{auxhook}[2009/12/14]
265 \def\Hy@Error{\@PackageError{hyperref}}
266 \def\Hy@Warning{\@PackageWarning{hyperref}}
267 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
268 \def\Hy@Info{\@PackageInfo{hyperref}}
269 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
270 \def\Hy@Message#1{%
271   \GenericWarning{%
272     (hyperref)\@spaces\@spaces\@spaces\@spaces
273   }{%
274     Package hyperref Message: #1\ltx@gobble
275   }%
276 }

```

4.2 Version check

\Hy@VersionChecked

```

277 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

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

```

```

312      * \y: hyperref.sty\MessageBreak
313      * \z: \a
314      }\@ehd
315      \fi
316      \fi
317    }%
318  }%
319 \endgroup
320 \chardef\Hy@VersionChecked=1 %
321 }

```

\Hy@@VersionCheck

```

322 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
323 \def#1{#2 #3}%
324 }

```

4.3 Checks with regular expressions

```

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

```

```

364 \def\ltx@leftbracechar{0}%
365 }%
366 \begingroup
367 \lccode`0=`\}\relax
368 \lowercase{\endgroup
369 \def\ltx@rightbracechar{0}%
370 }%
371 }%
372 }

```

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 \LaTeX processing.

The default definition of `\AfterBeginDocument` cannot be done by `\let` because of problems with `xypic`.

```

373 \ifundefined{AfterBeginDocument}{%
374 \def\AfterBeginDocument{\AtBeginDocument}%
375 }{}%

```

`\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.

```

376 \def\Hy@AtBeginDocument{%
377 \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
378 }

```

`\Hy@AtEndOfPackage`

```

379 \def\Hy@AtEndOfPackage{%
380 \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
381 }

```

`\Hy@AtBeginDocumentHook`

```

382 \let\Hy@AtBeginDocumentHook\ltx@empty

```

`\Hy@AtEndOfPackageHook`

```

383 \let\Hy@AtEndOfPackageHook\ltx@empty

```

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

```

384 \AtEndOfPackage{%
385 \Hy@AtEndOfPackageHook
386 \let\Hy@AtEndOfPackageHook\@undefined
387 \AfterBeginDocument{%
388 \Hy@AtBeginDocumentHook}%
389 \let\Hy@AtBeginDocumentHook\@undefined
390 }%
391 }

```

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

```

392 \RequirePackage{kvoptions}[2009/07/21]

```

4.5 Switches

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

Defaults for the switches are now set.

```
444 \Hy@backreffalse
445 \Hy@bookmarksnumberedfalse
446 \Hy@bookmarksopenfalse
```



```

447 \Hy@bookmarkstrue
448 \Hy@breaklinksfalse
449 \Hy@pdfcenterwindowfalse
450 \Hy@CJKbookmarksfalse
451 \Hy@destlabelfalse
452 \Hy@pdfescapeformfalse
453 \Hy@hyperfiguresfalse
454 \Hy@pdffitwindowfalse
455 \Hy@hyperfootnotesttrue
456 \Hy@hyperindextrue
457 \Hy@hypertextnamestrue
458 \Hy@implicitttrue
459 \Hy@linktocpagefalse
460 \Hy@localanchornamefalse
461 \Hy@pdfmenubartrue
462 \Hy@naturalnamesfalse
463 \Hy@nestingfalse
464 \Hy@pdfnewwindowsetfalse
465 \Hy@pdfnewwindowfalse
466 \Hy@pageanchortrue
467 \Hy@pdfpagelabelstrue
468 \Hy@pdfpagehiddenfalse
469 \Hy@pdfstringfalse
470 \Hy@plainpagesfalse
471 \Hy@raiselinksfalse
472 \Hy@setpagesizetrue
473 \Hy@texhtfalse
474 \Hy@psdextrafalse
475 \Hy@pdftoolbartrue
476 \Hy@typexmlfalse
477 \Hy@unicodedefalse
478 \Hy@pdfusetitlefalse
479 \Hy@verbosefalse
480 \Hy@pdfwindowuitrue
481 \Hy@pdfdisplaydoctitlefalse
482 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

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

\Hy@GlobalStepCount

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

```

485 \newdimen\@linkdim
486 \let\Hy@driver\ltx@empty
487 \let\MaybeStopEarly\relax
488 \newcount\Hy@linkcounter
489 \newcount\Hy@pagecounter
490 \Hy@linkcounter0
491 \Hy@pagecounter0

```

5.1 Macros for recursions

```

492 \let\Hy@ReturnEnd\@empty
493 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}

```

```
494 \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.

```
495 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
496 \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`

```
497 \begingroup\expandafter\expandafter\expandafter\endgroup
498 \expandafter\ifx\csname dimexpr\endcsname\relax
499 \def\hypercalcbpdef#1#2{%
500   \begingroup
501     \toks@{}%
502     \HyCal@scan#2\hypercalcbp\@nil
503   \expandafter\endgroup
504   \expandafter\def\expandafter#1\expandafter{\the\toks@}%
505 }%
506 \def\HyCal@scan#1\hypercalcbp#2\@nil{%
507   \toks@\expandafter{\the\toks@ #1}%
508   \ifx\#2\%
509     \else
510       \ltx@ReturnAfterFi{%
511         \HyCal@do#2\@nil
512       }%
513     \fi
514 }
```

```

513 \fi
514 }%
515 \def\HyCal@do#1#2\@nil{%
516 \@ifpackageloaded{calc}{}{%
517 \Hy@Warning{%
518 For calculations \string\hypercalcbp\space needs\MessageBreak
519 package calc or e-TeX%
520 }%
521 }%
522 \setlength{\dimen@}{#1}%
523 \setlength{\dimen@}{0.99626401\dimen@}%
524 \edef\x{%
525 \toks@{%
526 \the\toks@
527 \strip@pt\dimen@
528 }%
529 }\x
530 \HyCal@scan#2\@nil
531 }%
532 \else
533 \def\hypercalcbp#1{%
534 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
535 }%
536 \def\hypercalcbpdef{\def}%
537 \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 <i>ddd</i> |
- Strings are stored either in `PDFDocEncoding`, which is a superset of ISO-Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

The central macro for dealing with PDF strings is `\pdfstringdef`. It defines a command `#1` to be the result of the conversion from the string in `#2` to a le-

gal PDFDocEncoded string. Currently the definition is global, but this can be changed in the future.

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

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

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

`\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 T_EX, because the tokens have only cat-codes 10 until 12.

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

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

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

```
539 \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 T_EX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard L^AT_EX behaviour.

```
540 \escapechar`\\%
```

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

```
541 \edef\0{\string\0}%
542 \edef\1{\string\1}%
543 \edef\2{\string\2}%
544 \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.

```

545 \ifHy@unicode
546 \edef\8{\string\8}%
547 \edef\9{\string\9}%
548 \fontencoding{PU}%
549 \HyPsd@UTFviii
550 \def\ifpdfstringunicode###1##2{##1}%
551 \else
552 \fontencoding{PD1}%
553 \def\ifpdfstringunicode###1##2{##2}%
554 \fi
555 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
556 \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).

```

557 \@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).

```

558 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

559 \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/ho-tex/hyperref/issues/37> No test for PU, if some definition for PD1 is added it will work too.

```

560 \let\{\textbraceleft
561 \let\}\textbraceright
562 \let\\\textbackslash
563 \let\#\textnumbersign
564 \let\$\textdollar
565 \let\%\textpercent
566 \let\&\textampersand
567 \% \let\~\textasciitilde
568 \let\_ \textunderscore
569 \let\P\textparagraph
570 \let\ldots\textellipsis
571 \let\dots\textellipsis

```

```

572 \ltx@ifundefined{textEncodingNoboundary}%
573 {}{\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.

```

574 \def\\\{\pdfstringdefWarn\\}%
575 \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.

```

576 \def\TeX{\TeX}%
577 \def\LaTeX{\LaTeX}%
578 \def\LaTeXe{%
579   \LaTeX2%
580   \ifHy@unicode\textepsilon\else e\fi
581 }%
582 \def\eTeX{%
583   \ifHy@unicode\textepsilon\else e\fi
584   -\TeX%
585 }%
586 \def\SlTeX{\SlTeX}%
587 \def\MF{Metafont}%
588 \def\MP{Metapost}%

```

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

```

589 \let\fontencoding\@gobble
590 \let\fontfamily\@gobble
591 \let\fontseries\@gobble
592 \let\fontshape\@gobble
593 \let\fontsize\@gobbletwo
594 \let\selectfont\@empty
595 \let\usefont\@gobblefour
596 \let\emph\@firstofone
597 \let\textnormal\@firstofone
598 \let\textrm\@firstofone
599 \let\textsf\@firstofone
600 \let\texttt\@firstofone
601 \let\textbf\@firstofone
602 \let\textmd\@firstofone
603 \let\textit\@firstofone
604 \let\textsc\@firstofone
605 \let\textsl\@firstofone
606 \let\textup\@firstofone
607 \let\normalfont\@empty

```

```

608 \let\rmfamily\@empty
609 \let\ssffamily\@empty
610 \let\ttfamily\@empty
611 \let\bfseries\@empty
612 \let\mdseries\@empty
613 \let\itshape\@empty
614 \let\scshape\@empty
615 \let\slshape\@empty
616 \let\upshape\@empty
617 \let\em\@empty
618 \let\rm\@empty
619 \let\Huge\@empty
620 \let\LARGE\@empty
621 \let\Large\@empty
622 \let\footnotesize\@empty
623 \let\huge\@empty
624 \let\large\@empty
625 \let\normalsize\@empty
626 \let\scriptsize\@empty
627 \let\small\@empty
628 \let\tiny\@empty
629 \let\mathversion\@gobble
630 \let\phantom\@gobble
631 \let\vphantom\@gobble
632 \let\hphantom\@gobble

```

Package pifont.

```

633 \let\ding\HyPsd@ding
634 \let\Cube\HyPsd@DieFace
635 %* \HyPsd@DieFace -> \epsdice (epsdice)
636 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

637 \def\begin#1{\csname#1\endcsname}%
638 \def\end#1{\csname end#1\endcsname}%

```

Package color.

```

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

```

Upper- and lowercase.

```

640 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
641 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

642 \ifHy@psdextra
643 \ifHy@unicode
644 \csname psdmapshortnames\endcsname
645 \csname psdaliasnames\endcsname
646 \fi
647 \fi

```

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

```

648 \let\foreignlanguage\@secondoftwo
649 \let\textlatin\@firstofone
650 \ltx@ifundefined{language@group}{\}{\%
651   \let\bbl@info\@gobble
652   \csname HyPsd@babel@\language@group\endcsname
653 }%
654 \HyPsd@GreekPatch
655 \HyPsd@SpanishPatch
656 \HyPsd@RussianPatch
657 \HyPsd@BabelPatch
658 \let\@safe@activetrue\relax
659 \let\@safe@activesfalse\relax

```

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

```

660 \let\cyr\relax

```

Redefine `\es@roman`, used in `spanish.ldf`.

```

661 \let\es@roman\@Roman

```

Package german.

```

662 \let\glqq\textglqq
663 \let\grqq\textgrqq
664 \let\glq\textglq
665 \let\grq\textgrq
666 \let\flqq\textflqq
667 \let\frqq\textfrqq
668 \let\flq\textflq
669 \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}

```

```

670 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

671 \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.

```

672 \let\hspace\HyPsd@hspace

```

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

```

673 \let\label\@gobble
674 \let\index\@gobble
675 \let\glossary\@gobble
676 \let\href\HyPsd@href
677 \let\@mkboth\@gobbletwo

```


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

```
678 \let\ref\HyPsd@ref
679 \let\pageref\HyPsd@pageref
680 \let\nameref\HyPsd@nameref
681 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
682 \let\leavevmode\@empty
683 \let\mbox\@empty
\halign causes error messages because of the template character #.
684 \def\halign{\pdfstringdefWarn\halign\@gobble}%
685 \let\ignorespaces\HyPsd@ignorespaces
686 \let\Hy@SectionAnchorHref\@gobble
687 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
688 \HyPsd@CJKhook
```

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

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

```
689 \Hy@pdfstringtrue
690 \pdfstringdefPreHook
```

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

```
691 \HyPsd@LetUnexpandableSpace\space
692 \HyPsd@LetUnexpandableSpace\ %
693 \HyPsd@LetUnexpandableSpace~%
694 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
695 \ltx@ifundefined{@xspace}{}%
696 \let\xspace\HyPsd@ITALCORR
697 }{%
698 \let\xspace\HyPsd@XSPACE
699 }%
700 \let/\HyPsd@ITALCORR
701 \let\bgroup\/%
702 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
703 \let\discretionary\@gobbletwo
```

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

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

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

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

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

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

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

```
707 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

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

6.2.2 Expansion

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

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

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

\edef This version uses this standard form for expansion. It is stronger than L^AT_EX's \protected@edef. So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of L^AT_EX doesn't work within an \edef, there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see \texorpdfstring). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with \csname. However a PDF reader isn't T_EX, so these tokens are viewed verbatim. So this version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

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

```
709 \begingroup
710 \let\GenericError\@gobblefour
711 \let\GenericWarning\@gobbletwo
712 \let\GenericInfo\@gobbletwo
```

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

```
713 \ifx\nofrenchguillemets\@undefined
714 \else
715 \nofrenchguillemets
716 \fi
```

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

```
717 \let\Hy@temp\xdef
718 \let\def\HyPsd@DefCommand
719 \let\gdef\HyPsd@DefCommand
720 \let\edef\HyPsd@DefCommand
721 \let\xdef\HyPsd@DefCommand
722 \let\futurelet\HyPsd@LetCommand
723 \let\let\HyPsd@LetCommand
724 \Hy@temp#1{#2}%
725 \endgroup
```

6.2.3 Postprocessing

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

```
726 \ifx#1\@empty
727 \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.

```

728 \HyPsd@ProtectSpaces#1%
729 \let\HyPsd@String\@empty
730 \expandafter\HyPsd@RemoveBraces\expandafter{#1}%
731 \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.

```

732 \let\HyPsd@SPACEOPTI\relax
733 {%
734 \let\HyPsd@String\@empty
735 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@end
736 \global\let#1\HyPsd@String
737 }%
738 \expandafter\HyPsd@RemoveMask\expandafter
739 |\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.

```

740 \expandafter
741 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
742 \let\HyPsd@String\@empty
743 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
744 \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.

```
745 \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.

```

746 \ifHy@unicode
747 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
748 \HyPsd@SPACEOPTI#1%
749 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
750 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
751 {\HyPsd@SPACEOPTI\80\273}#1%
752 \else
753 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
754 \expandafter\HyPsd@Subst\expandafter{%
755 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
756 \string\273}\HyPsd@SPACEOPTI\273}#1%
757 \fi

```

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

```

758 \ifHy@unicode
759 \HyPsd@StringSubst{\}){\80\051}#1%
760 \HyPsd@Subst){\80\051}#1%
761 \let\HyPsd@empty\relax
762 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
763 {\HyPsd@empty\80\051}#1%
764 \else
765 \HyPsd@StringSubst{\}){\051}#1%
766 \HyPsd@Subst){\051}#1%
767 \let\HyPsd@empty\relax
768 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\})}#1%
769 \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`.

```

770 \expandafter\HyPsd@Subst\expandafter{\//}\HyPsd@empty#1%
771 \ltx@ifundefined{xspace}{%
772 }{%

```

```

773 \let\HyPsd@xspace\relax
774 \expandafter\HyPsd@Subst\expandafter
775   {\HyPsd@XSPACE}\HyPsd@xspace#1%
776 \let\HyPsd@xspace\HyPsd@doxspace
777 }%
778 \xdef#1{#1\HyPsd@empty}%

```

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

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

```

779 \HyPsd@Subst{---}\textemdash#1%
780 \HyPsd@Subst{--}\textendash#1%
781 % \HyPsd@Subst{fi}\textfi#1%
782 % \HyPsd@Subst{fl}\textfl#1%
783 \HyPsd@Subst{!}\textexclamdown#1%
784 \HyPsd@Subst{?}\textquestiondown#1%

```

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

```

785 \let\HyPsd@empty\@empty

```

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

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

```

786 \ifHy@unicode
787 \HyPsd@StringSubst\(\textparenleft#1%
788 \HyPsd@Subst(\textparenleft#1%
789 \else
790 \HyPsd@StringSubst\({\050}#1%
791 \HyPsd@Subst({\050}#1%
792 \HyPsd@StringSubst{\050}\string\{}#1%
793 \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.

```

794 \ifHy@unicode
795 \edef\HyPsd@SPACEOPTI{\80\040}%
796 \else
797 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
798 \fi
799 \xdef#1{#1\@empty}%
800 \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.

```

801 \endgroup
802 \begingroup
803 \ifHy@unicode
804   \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

805   \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
806     \let\IfUndefined{StringEncodingConvertTest}{%
807       }{%
808         \EdefUnescapeString\HyPsd@temp#1%
809         \ifxetex
810           \let\HyPsd@UnescapedString\HyPsd@temp
811           \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
812             {utf16be}{ascii-print}{%
813               \EdefEscapeString\HyPsd@temp\HyPsd@temp
814               \global\let#1\HyPsd@temp
815               \HyPsd@EscapeTeX#1%
816               \Hy@unicodedefalse
817             }{%
818               \HyPsd@ToBigChars#1%
819               \HyPsd@EscapeTeX#1%
820             }%
821         \else
822           \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
823             {utf16be}{pdfdoc}{%
824               \EdefEscapeString\HyPsd@temp\HyPsd@temp
825               \global\let#1\HyPsd@temp
826               \HyPsd@EscapeTeX#1%
827               \Hy@unicodedefalse
828             }{%}%
829         \fi
830       }%
831     \fi
832   \fi
833   \HyPsd@XeTeXBigCharsfalse

```

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

```

834   \pdfstringdefPostHook#1%
835 \endgroup
836 }

```

\Hy@pdfstringdef

```

837 \def\Hy@pdfstringdef#1#2{%
838   \pdfstringdef\Hy@gtemp{#2}%
839   \let#1\Hy@gtemp
840 }

```

6.3 Encodings

6.3.1 XeTeX

```

841 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
842 \catcode\z@=12 %

```

```

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

```



```

900     \fi
901   \fi
902   \lowercase{%
903     \toks@\expandafter{%
904       \the\expandafter\toks@
905       \y
906       ^^@%
907     }%
908   }%
909   \fi
910   \x
911 }%
912 }
913 \Hy@temp

```

6.3.2 Workaround for package linguex

```

914 \@ifpackageloaded{linguex}{%
915   \let\HyLinguex@OrgB\b
916   \let\HyLinguex@OrgC\c
917   \let\HyLinguex@OrgD\d
918   \def\HyLinguex@Restore{%
919     \let\b\HyLinguex@OrgB
920     \let\c\HyLinguex@OrgC
921     \let\d\HyLinguex@OrgD
922   }%
923   \Hy@AtEndOfPackage{%
924     \pdfstringdefDisableCommands{%
925       \ltx@ifundefined{oldb}{\let\b\oldb}%
926       \ltx@ifundefined{oldc}{\let\c\oldc}%
927       \ltx@ifundefined{oldd}{\let\d\oldd}%
928     }%
929   }%
930 }{%
931   \let\HyLinguex@Restore\relax
932 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

933 \def\Hy@SaveCatcodeSettings#1{%
934   \expandafter\edef\csname Hy@cat@#1\endcsname{%
935     \endlinechar=\the\endlinechar\relax
936     \catcode32 \the\catcode32\relax % (space)
937     \catcode34 \the\catcode34\relax % "
938     \catcode35 \the\catcode35\relax % #
939     \catcode37 \the\catcode37\relax % (percent)
940     \catcode40 \the\catcode40\relax % (
941     \catcode41 \the\catcode41\relax % )
942     \catcode42 \the\catcode42\relax % *
943     \catcode46 \the\catcode46\relax % .
944     \catcode58 \the\catcode58\relax % :
945     \catcode60 \the\catcode60\relax % <
946     \catcode61 \the\catcode61\relax % =
947     \catcode62 \the\catcode62\relax % >
948     \catcode64 \the\catcode64\relax % @
949     \catcode91 \the\catcode91\relax % [
950     \catcode92 \the\catcode92\relax % \
951     \catcode93 \the\catcode93\relax % ]

```

```

952 \catcode123 \the\catcode123\relax % {
953 \catcode124 \the\catcode124\relax % |
954 \catcode125 \the\catcode125\relax % }
955 }%
956 \endlinechar=-1 %
957 \catcode32 10 % (space)
958 \catcode34 12 % "
959 \catcode35 6 % #
960 \catcode37 14 % (percent)
961 \catcode40 12 % (
962 \catcode41 12 % )
963 \catcode42 12 % *
964 \catcode46 12 % .
965 \catcode58 12 % :
966 \catcode60 12 % <
967 \catcode61 12 % =
968 \catcode62 12 % >
969 \catcode91 12 % [
970 \catcode92 0 % \
971 \catcode93 12 % ]
972 \catcode123 1 % {
973 \catcode124 12 % |
974 \catcode125 2 % }
975 \makeatletter
976 }

```

\Hy@RestoreCatcodeSettings

```

977 \def\Hy@RestoreCatcodeSettings#1{%
978 \csname Hy@cat@#1\endcsname
979 \expandafter\let\csname Hy@cat@#1\endcsname\relax
980 }

```

6.3.4 PD1 encoding

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

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

```

981 \@ifundefined{T@PD1}{%
982 \Hy@SaveCatcodeSettings{pd1}%
983 \input{pd1enc.def}%
984 \Hy@RestoreCatcodeSettings{pd1}%
985 \HyLinguex@Restore
986 }{}
987 \DeclareFontFamily{PD1}{pdf}{}
988 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
989 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.5 PU encoding

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

`\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`.

```

990 \def\HyPsd@LoadUnicode{%
991   \@ifundefined{T@PU}{%
992     \Hy@SaveCatcodeSettings{pu}%
993     \input{puenc.def}%
994     \Hy@RestoreCatcodeSettings{pu}%
995     \HyLinguex@Restore
996   }{}%
997   \DeclareFontFamily{PU}{pdf}{}%
998   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
999   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
1000 \HyPsd@LoadExtra
1001 \let\HyPsd@LoadUnicode\relax
1002 }

```

`\HyPsd@LoadExtra`

```

1003 \def\HyPsd@LoadExtra{%
1004   \ifHy@psdextra
1005     \ltx@iffileloaded{puenc.def}{%
1006       \Hy@SaveCatcodeSettings{psdextra}%
1007       \input{psdextra.def}%
1008       \Hy@RestoreCatcodeSettings{psdextra}%
1009       \let\HyPsd@LoadExtra\relax
1010     }{}%
1011   \fi
1012 }

```

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 \TeX 's stomach, the second contains the replacement for PDF strings.

```

1013 \def\texorpdfstring{%
1014   \ifHy@pdfstring
1015     \expandafter\@secondoftwo
1016   \else
1017     \expandafter\@firstoftwo
1018   \fi
1019 }

```

6.4.2 Hooks for `\pdfstringdef`

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

```

1020 \@ifundefined{pdfstringdefPreHook}{%
1021   \let\pdfstringdefPreHook\@empty
1022 }{}
1023 \@ifundefined{pdfstringdefPostHook}{%
1024   \let\pdfstringdefPostHook\@gobble
1025 }{}

```

`\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`.

```
1026 \def\pdfstringdefDisableCommands{%
1027   \begingroup
1028     \makeatletter
1029     \HyPsd@DisableCommands
1030 }
```

`\HyPsd@DisableCommands`

```
1031 \long\def\HyPsd@DisableCommands#1{%
1032   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1033   \endgroup
1034 }
```

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

```
1035 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
1036 \AtBeginDocument{%
1037   \@ifundefined{pdfstringdefDisableCommands}{%
1038     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
1039   }{}%
1040 }
```

`\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`.

```
1041 \def\pdfstringdefWarn#1{%
1042   \expandafter\noexpand\csname<>-string#1\endcsname
1043 }
```

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.

```

1044 \begingroup
1045 \catcode0=12 %
1046 \def\x{\endgroup
1047 \def\HyPsd@ignorespaces{%
1048 \romannumeral\expandafter`\expandafter^^@%
1049 \romannumeral`^^@%
1050 }%
1051 }%
1052 \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`.

```

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

```

```

1086 \let\Hy@temp\@empty
1087 }{%
1088 \def\HyPsd@BabelPatch{%
1089 \let\HyOrg@languageshorthands\languageshorthands
1090 }%
1091 }%
1092 }{}%
1093 }
1094 \Hy@temp
1095 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1096 \newif\ifHy@next

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

```

```

1141 }%
1142 }
1143 \ltx@ifundefined{russian@sh@"@sel}{-}{-}%
1144 \def\HyPsd@babel@russian{%
1145   \declare@shorthand{russian}{"}{-}%
1146   \declare@shorthand{russian}{"}{-}%
1147 }%
1148 }
1149 \ltx@ifundefined{slovene@sh@"@sel}{-}{-}%
1150 \def\HyPsd@babel@slovene{%
1151   \declare@shorthand{slovene}{"}{-}%
1152 }%
1153 }

```

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

```

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

```

```

1197 \ifHy@unicode
1198 \ifnum#2<\@ne
1199 \@arabic{#2}%
1200 \else
1201 \ifnum#2<1000000 %
1202 \HyPsd@@GreekNum#1{#2}%
1203 \else
1204 \@arabic{#2}%
1205 \fi
1206 \fi
1207 \else
1208 \@arabic{#2}%
1209 \fi
1210 }
1211 \def\HyPsd@@GreekNum#1#2{%
1212 \ifnum#2<\@m
1213 \ifnum#2<10 %
1214 \expandafter\HyPsd@GreekNumI
1215 \expandafter\@gobble\expandafter#1\number#2%
1216 \else
1217 \ifnum#2<100 %
1218 \expandafter\HyPsd@GreekNumII
1219 \expandafter\@gobble\expandafter#1\number#2%
1220 \else
1221 \expandafter\HyPsd@GreekNumIII
1222 \expandafter\@gobble\expandafter#1\number#2%
1223 \fi
1224 \fi
1225 \ifnum#2>\z@
1226 \textnumeralsigngreek
1227 \fi
1228 \else
1229 \ifnum#2<\@M
1230 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1231 \else
1232 \ifnum#2<100000 %
1233 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1234 \else
1235 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1236 \fi
1237 \fi
1238 \fi
1239 }
1240 \def\HyPsd@GreekNumI#1#2#3{%
1241 #1{%
1242 \ifnum#3>\z@
1243 \textnumeralsignlowergreek
1244 \fi
1245 }%
1246 \expandafter#2%
1247 \ifcase#3 %
1248 {}{}%
1249 \or\textalpha\textAlpha
1250 \or\textbeta\textBeta
1251 \or\textgamma\textGamma
1252 \or\textdelta\textDelta
1253 \or\textepsilon\textEpsilon

```



```

1254 \or\textstigmagreek\textStigmagreek
1255 \or\textzeta\textZeta
1256 \or\texteta\textEta
1257 \or\texttheta\textTheta
1258 \else
1259 {}{}%
1260 \fi
1261 }
1262 \def\HyPsd@GreekNumII#1#2#3#4{%
1263 #1{%
1264 \ifnum#3>\z@
1265 \textnumeralsignlowergreek
1266 \fi
1267 }%
1268 \expandafter#2%
1269 \ifcase#3 %
1270 {}{}%
1271 \or\textiota\textIota
1272 \or\textkappa\textKappa
1273 \or\textlambda\textLambda
1274 \or\textmu\textMu
1275 \or\textnu\textNu
1276 \or\textxi\textXi
1277 \or\textomicron\textOmicron
1278 \or\textpi\textPi
1279 \or\textkoppagreek\textKoppagreek
1280 \else
1281 {}{}%
1282 \fi
1283 \HyPsd@GreekNumI#1#2#4%
1284 }
1285 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1286 #1{%
1287 \ifnum#3>\z@
1288 \textnumeralsignlowergreek
1289 \fi
1290 }%
1291 \expandafter#2%
1292 \ifcase#3 %
1293 {}{}%
1294 \or\extrho\textRho
1295 \or\textsigma\textSigma
1296 \or\texttau\textTau
1297 \or\textupsilon\textUpsilon
1298 \or\textphi\textPhi
1299 \or\textchi\textChi
1300 \or\textpsi\textPsi
1301 \or\textomega\textOmega
1302 \or\textsampigreek\textSampigreek
1303 \else
1304 {}{}%
1305 \fi
1306 \HyPsd@GreekNumII#1#2#4#5%
1307 }
1308 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1309 \HyPsd@GreekNumI\@firstofone#1#2%
1310 \HyPsd@@@GreekNum#1{#3#4#5}%

```

```

1311 }
1312 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1313 \HyPsd@GreekNumII\@firstofone#1#2#3%
1314 \HyPsd@@@GreekNum#1{#4#5#6}%
1315 }
1316 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1317 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1318 \HyPsd@@@GreekNum#1{#5#6#7}%
1319 }

1320 \def\HyPsd@SpanishPatch{%
1321 \ltx@ifundefined{es@save@dot}{%
1322 }{%
1323 \let\.\es@save@dot
1324 }%
1325 }

```

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

```

1326 \def\HyPsd@RussianPatch{%
1327 \ltx@ifundefined{russian@sh@"@-@}{%
1328 }{%
1329 \@namedef{russian@sh@"@-@}{-}%
1330 }%
1331 }

```

6.5.3 CJK patch

```

1332 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1333 \def\HyPsd@CJKhook{%
1334 \ltx@ifpackageloaded{CJK}{%
1335 \let\CJK@kern\relax
1336 \let\CJKkern\relax
1337 \let\CJK@CJK\relax
1338 \ifHy@CJKbookmarks
1339 \HyPsd@CJKhook@bookmarks
1340 \fi
1341 \HyPsd@CJKhook@unicode
1342 }{}%
1343 }

```

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 ($\geq 0x40$).

```

1344 \begingroup
1345 \catcode"7F=\active
1346 \toks@{%

```

```

1347 \let\CJK@ignorespaces\empty
1348 \def\CJK@char#1{\@gobbletwo}%
1349 \let\CJK@charx\@gobblefour
1350 \let\CJK@punctchar\@gobblefour
1351 \def\CJK@punctcharx#1{\@gobblefour}%
1352 \catcode"7F=\active
1353 \def^^7f#1^^7f#2^^7f{%
1354   \string #1\HyPsd@DecimalToOctal{#2}%
1355 }%
1356 % ... ?
1357 \ifHy@unicode
1358   \def\Hy@cjku{\80}%
1359 \else
1360   \let\Hy@cjku\@empty
1361 \fi
1362 \HyPsd@CJKActiveChars
1363 }%
1364 \count@=127 %
1365 \@whilenum\count@<255 \do{%
1366   \advance\count@ by 1 %
1367   \lccode`~=\count@
1368   \lowercase{%
1369     \toks@\expandafter{\the\toks@ ~}%
1370   }%
1371 }%
1372 \toks@\expandafter{\the\toks@ !}%
1373 \xdef\HyPsd@CJKhook@bookmarks{%
1374   \the\toks@
1375 }%
1376 \endgroup

```

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

```

1377 \def\HyPsd@CJKActiveChars#1{%
1378   \ifx#1!%
1379     \let\HyPsd@CJKActiveChars\relax
1380   \else
1381     \edef#1{\noexpand\Hy@cjku\string#1}%
1382   \fi
1383   \HyPsd@CJKActiveChars
1384 }

```

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

```

1385 \def\HyPsd@DecimalToOctal#1{%
1386   \ifcase #1 %
1387     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1388     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1389     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1390     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1391     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1392     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1393     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1394     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1395     \or @\or A\or B\or C\or D\or E\or F\or G%
1396     \or H\or I\or J\or K\or L\or M\or N\or O%
1397     \or P\or Q\or R\or S\or T\or U\or V\or W%
1398     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%

```

```

1399 \or \140\or a\or b\or c\or d\or e\or f\or g%
1400 \or h\or i\or j\or k\or l\or m\or n\or o%
1401 \or p\or q\or r\or s\or t\or u\or v\or w%
1402 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1403 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1404 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1405 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1406 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1407 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1408 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1409 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1410 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1411 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1412 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1413 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1414 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1415 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1416 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1417 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1418 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1419 \fi
1420 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1421 \def\HyPsd@CJKhook@unicode{%
1422 \let\Unicode\HyPsd@CJK@Unicode
1423 \let\CJKnumber\HyPsd@CJKnumber
1424 \let\CJKdigits\HyPsd@CJKdigits
1425 }

```

\HyPsd@CJK@Unicode

```

1426 \def\HyPsd@CJK@Unicode#1#2{%
1427 \ifnum#1<256 %
1428 \HyPsd@DecimalToOctalFirst{#1}%
1429 \HyPsd@DecimalToOctalSecond{#2}%
1430 \else
1431 \933%
1432 \expandafter\expandafter\expandafter\HyPsd@HighA
1433 \intcalcDiv{#1}{4}!%
1434 \933%
1435 \ifcase\intcalcMod{#1}{4} %
1436 4\or 5\or 6\or 7%
1437 \fi
1438 \HyPsd@DecimalToOctalSecond{#2}%
1439 \fi
1440 }

1441 \def\HyPsd@HighA#1!{%
1442 \expandafter\expandafter\expandafter\HyPsd@HighB
1443 \IntCalcDiv#1!64!!%
1444 \expandafter\expandafter\expandafter\HyPsd@HighD
1445 \IntCalcMod#1!64!!%
1446 }
1447 \def\HyPsd@HighB#1!{%
1448 \expandafter\expandafter\expandafter\HyPsd@HighC

```

```

1449 \IntCalcDec#1!!%
1450 }
1451 \def\HyPsd@HighC#1!{%
1452 \IntCalcDiv#1!4!%
1453 \@backslashchar
1454 \IntCalcMod#1!4!%
1455 }
1456 \def\HyPsd@HighD#1!{%
1457 \ifcase\IntCalcDiv#1!8! %
1458 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1459 \fi
1460 \ifcase\IntCalcMod#1!8! %
1461 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1462 \fi
1463 }
1464 \def\HyPsd@DecimalToOctalFirst#1{%
1465 \9%
1466 \ifcase#1 %
1467 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1468 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1469 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1470 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1471 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1472 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1473 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1474 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1475 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1476 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1477 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1478 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1479 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1480 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1481 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1482 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1483 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1484 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1485 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1486 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1487 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1488 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1489 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1490 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1491 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1492 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1493 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1494 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1495 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1496 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1497 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1498 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1499 \fi
1500 }
1501 \def\HyPsd@DecimalToOctalSecond#1{%
1502 \ifcase #1 %
1503 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1504 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1505 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%

```

```

1506 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1507 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1508 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1509 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1510 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1511 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1512 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1513 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1514 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1515 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1516 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1517 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1518 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1519 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1520 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1521 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1522 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1523 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1524 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1525 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1526 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1527 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1528 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1529 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1530 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1531 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1532 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1533 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1534 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1535 \fi
1536 }

1537 \def\HyPsd@CJKnumber#1{%
1538 \ifnum#1<\z@
1539 \CJK@minus
1540 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1541 \else
1542 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1543 \fi
1544 }

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

```

```

1563     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1564     \IntCalcMod#1!10000!%
1565     !\CJK@zero{10}%
1566     \@empty
1567   \else
1568     \expandafter\HyPsd@CJKnumberLarge
1569     \number\IntCalcDiv#1!100000000!\expandafter!%
1570     \number\IntCalcMod#1!100000000!!%
1571   \fi
1572 \fi
1573 \fi
1574 }
1575 \def\HyPsd@CJKnumberLarge#1!#2!{%
1576   \HyPsd@CJKnumberFour#1!{}{20}%
1577   \CJK@hundredmillion
1578   \ifnum#2=\z@
1579   \else
1580     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1581     \IntCalcDiv#2!10000!%
1582     !\CJK@zero{10}%
1583     \CJK@tenthousand
1584     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1585     \IntCalcMod#2!10000!%
1586     !\CJK@zero{10}%
1587     \@empty
1588   \fi
1589 }
1590 \def\HyPsd@CJKnumberFour#1!#2#3{%
1591   \ifnum#1=\z@
1592     \expandafter\@gobble
1593   \else
1594     \ifnum#1<1000 %
1595       #2%
1596       \HyPsd@CJKnumberThree#1!{}{#3}%
1597     \else
1598       \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1599       \CJK@thousand
1600       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1601       \IntCalcMod#1!1000!%
1602       !\CJK@zero{10}%
1603     \fi
1604   \fi
1605 }
1606 \def\HyPsd@CJKnumberThree#1!#2#3{%
1607   \ifnum#1=\z@
1608   \else
1609     \ifnum#1<100 %
1610       #2%
1611       \HyPsd@CJKnumberTwo#1!{}{#3}%
1612     \else
1613       \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1614       \CJK@hundred
1615       \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1616       \IntCalcMod#1!100!%
1617       !\CJK@zero{10}%
1618     \fi
1619   \fi

```

```

1620 }
1621 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1622   \ifnum#1=\z@
1623   \else
1624     \ifnum#1<#3 %
1625       #2%
1626       \HyPsd@@@CJKnumber{#1}%
1627     \else
1628       \HyPsd@@@CJKnumber{\IntCalcDiv#1!10!}%
1629       \CJK@ten
1630       \ifnum\IntCalcMod#1!10!=\z@
1631       \else
1632         \HyPsd@@@CJKnumber{\IntCalcMod#1!10!}%
1633       \fi
1634     \fi
1635   \fi
1636 }

1637 \def\HyPsd@CJKdigits#1{%
1638   \ifx*#1\relax
1639     \expandafter\HyPsd@@@CJKdigits\expandafter\CJK@zero
1640   \else
1641     \HyPsd@@@CJKdigits\CJK@null{#1}%
1642   \fi
1643 }

1644 \def\HyPsd@@@CJKdigits#1#2{%
1645   \ifx\#2\%
1646   \else
1647     \HyPsd@@@@CJKdigits#1#2\@nil
1648   \fi
1649 }%

1650 \def\HyPsd@@@@CJKdigits#1#2#3\@nil{%
1651   \HyPsd@CJKdigit#1{#2}%
1652   \ifx\#3\%
1653     \expandafter\@gobble
1654   \else
1655     \expandafter\@firstofone
1656   \fi
1657   {%
1658     \HyPsd@@@@@CJKdigits#1#3\@nil
1659   }%
1660 }

1661 \def\HyPsd@CJKdigit#1#2{%
1662   \ifcase#2 %
1663     #1\or
1664     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1665     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1666   \fi
1667 }

```

6.5.6 \@inmathwarn-Patch

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

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

```

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

1668 \def\HyPsd@inmathwarn#1#2{%
1669   \ifx#2\expandafter
1670     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1671       \HyPsd@GLYPHERR
1672       \expandafter\@gobble\string#1%
1673       >%
1674       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1675     \else
1676       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1677     \fi
1678   \else
1679     \expandafter#2%
1680   \fi
1681 }
1682 \def\HyPsd@GobbleFiFi#1\fi#2\fi{%
1683 \def\HyPsd@EndWithElse#1\else{\else}

\HyPsd@add@accent
1684 \def\HyPsd@add@accent#1#2{%
1685   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%

```

```
1686 #2%
1687 }%
```

6.5.7 Unexpandable spaces

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

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

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

```
1688 \def\HyPsd@LetUnexpandableSpace#1{%
1689   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1690 }
```

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

```
1691 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

`\HyPsd@XSPACE` `\HyPsd@ITALCORR` `\HyPsd@GLYPHERR` 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.

```
1692 \edef\HyPsd@XSPACE{\string#\string X}
1693 \edef\HyPsd@ITALCORR{\string#\string I}
1694 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace` fix

`\HyPsd@hspace`

```
1695 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1696 \def\HyPsd@@hspace#1*##2\END{%
1697   \ifx\##2\%
1698     \HyPsd@hspacetest{#1}%
1699   \else
1700     \expandafter\HyPsd@hspacetest
1701   \fi
1702 }
```

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

```
1703 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```

1704 \ltx@ifundefined{tocsection}{%
1705   \let\HyPsd@AMSclassfix\relax
1706 }{%
1707   \def\HyPsd@AMSclassfix{%
1708     \let\tocpart\HyPsd@tocsection
1709     \let\tocchapter\HyPsd@tocsection
1710     \let\tocappendix\HyPsd@tocsection
1711     \let\tocsection\HyPsd@tocsection
1712     \let\tocsubsection\HyPsd@tocsection
1713     \let\tocsubsubsection\HyPsd@tocsection
1714     \let\tocparagraph\HyPsd@tocsection
1715   }%
1716   \def\HyPsd@tocsection#1#2#3{%
1717     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1718     #3%
1719   }%
1720 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1721 \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.

```

1722 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1723 \def\HyPsd@@ref#1*#2\END{%
1724   \ifx\#2\%
1725     \HyPsd@@@ref{#1}%
1726   \else
1727     \expandafter\HyPsd@@@ref
1728   \fi
1729 }%

```

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

```

1730 \def\HyPsd@@@ref#1{%
1731   \expandafter\ifx\csname r@#1\endcsname\relax
1732     ??%
1733   \else
1734     \expandafter\expandafter\expandafter
1735     \@car\csname r@#1\endcsname\@nil
1736   \fi
1737 }

```

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

```

1738 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1739 \def\HyPsd@@pageref#1*#2\END{%
1740   \ifx\#2\%
1741     \HyPsd@@@pageref{#1}%
1742   \else
1743     \expandafter\HyPsd@@@pageref

```

```

1744 \fi
1745 }

```

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

```

1746 \def\HyPsd@@@pageref#1{%
1747 \expandafter\ifx\csname r@#1\endcsname\relax
1748 ??%
1749 \else
1750 \expandafter\expandafter\expandafter\expandafter
1751 \expandafter\expandafter\expandafter\@car
1752 \expandafter\expandafter\expandafter\@gobble
1753 \csname r@#1\endcsname{}\@nil
1754 \fi
1755 }

```

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

```

1756 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1757 \def\HyPsd@@nameref#1*#2\END{%
1758 \ifx\#2\%
1759 \HyPsd@@@nameref{#1}%
1760 \else
1761 \expandafter\HyPsd@@@nameref
1762 \fi
1763 }

```

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

```

1764 \def\HyPsd@@@nameref#1{%
1765 \expandafter\ifx\csname r@#1\endcsname\relax
1766 ??%
1767 \else
1768 \expandafter\expandafter\expandafter\expandafter
1769 \expandafter\expandafter\expandafter\@car
1770 \expandafter\expandafter\expandafter\@gobbletwo
1771 \csname r@#1\endcsname{}\@nil
1772 \fi
1773 }

```

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

```

1774 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1775 \def\HyPsd@@autoref#1*#2\END{%
1776 \ifx\#2\%
1777 \HyPsd@@@autoref{#1}%
1778 \else
1779 \expandafter\HyPsd@@@autoref
1780 \fi
1781 }

```

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

```

1782 \def\HyPsd@@@autoref#1{%
1783 \expandafter\ifx\csname r@#1\endcsname\relax

```

```

1784   ??%
1785   \else
1786     \expandafter\expandafter\expandafter\HyPsd@autorefname
1787       \csname r@#1\endcsname\}\}\}\}\@nil
1788     \expandafter\expandafter\expandafter
1789     \@car\csname r@#1\endcsname\@nil
1790   \fi
1791 }

```

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

```

1792 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1793   \ifx\#4\%
1794   \else
1795     \HyPsd@@autorefname#4.\@nil
1796   \fi
1797 }

```

`\HyPsd@@autorefname`

```

1798 \def\HyPsd@@autorefname#1.#2\@nil{%
1799   \ltx@ifundefined{#1autorefname}{%
1800     \ltx@ifundefined{#1name}{%
1801       }{%
1802         \csname#1name\endcsname\space
1803       }%
1804     }{%
1805       \csname#1autorefname\endcsname\space
1806     }%
1807 }

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

```

\HyPsd@DefCommand
\HyPsd@LetCommand 1808 \begingroup
1809   \def\x#1#2{%
1810     \endgroup
1811     \let#1\def
1812     \def\HyPsd@DefCommand##1##2###{%
1813       #1%
1814       \expandafter\noexpand
1815       \csname\expandafter\@gobble\string##1\@empty\endcsname
1816       \@gobble
1817     }%
1818     \let#2\let
1819     \def\HyPsd@@LetCommand##1{%
1820       \expandafter\ifx\csname##1\expandafter\endcsname
1821         \csname iftrue\endcsname
1822       \pdfstringdefWarn\let
1823       \expandafter\@gobble
1824     \else
1825       \expandafter\ifx\csname##1\expandafter\endcsname
1826         \csname iffalse\endcsname
1827       \pdfstringdefWarn\let
1828       \expandafter\expandafter\expandafter\@gobble
1829     \else
1830       #2%
1831       \expandafter\noexpand
1832       \csname##1\expandafter\expandafter\expandafter\endcsname
1833     \fi
1834   \fi
1835 }%
1836 }%
1837 \expandafter\x\csname <def>-command\expandafter\endcsname
1838   \csname <let>-command\endcsname
1839 \def\HyPsd@LetCommand#1{%
1840   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1841   \expandafter\expandafter\expandafter{%
1842     \expandafter\@gobble\string#1\@empty
1843   }%
1844 }

```

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).

```

1845 \def\HyPsd@ifnextchar#1{%
1846   \pdfstringdefWarn#1%

```

```

1847 \expandafter\@gobbletwo\@gobble
1848 }

```

6.5.14 \@protected@testopt@ifnextchar

`\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`.

```

1849 \def\HyPsd@protected@testopt#1{%
1850   \pdfstringdefWarn#1%
1851   \@gobbletwo
1852 }

```

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:

```

1853 \def\HyPsd@Warning#1{%
1854   \begingroup
1855   \let\space\ltx@space
1856   \Hy@Warning{#1}%
1857   \endgroup
1858 }

```

6.6.2 Protecting spaces

```

1859 \RequirePackage{etexcmds}[2007/09/09]
1860 \ifetex@unexpanded
1861   \expandafter\@secondoftwo
1862 \else
1863   \expandafter\@firstoftwo
1864 \fi
1865 {%

```

`\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`.

```

1866   \def\HyPsd@ProtectSpaces#1{%
1867     \iftrue
1868       \expandafter\HyPsd@@ProtectSpacesFi
1869       \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1870     \fi
1871   }%

```

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

```

1872   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1873     \fi
1874     \ifx\scrollmode#2\scrollmode

```

```

1875 \HyPsd@RemoveMask#1\HyPsd@End#3%
1876 \else
1877 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1878 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1879 \fi
1880 }%

```

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.

```

1881 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1882 \toks\expandafter{#1}%
1883 \xdef#2{\the\toks@}%
1884 }%

1885 }{%
1886 \let\HyPsd@fi\fi
1887 \def\HyPsd@ProtectSpaces#1{%
1888 \xdef#1{%
1889 \iftrue
1890 \expandafter\HyPsd@@ProtectSpacesFi
1891 \expandafter|\expandafter\@empty#1| %
1892 \HyPsd@fi
1893 }%
1894 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1895 }%
1896 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1897 \fi
1898 \etex@unexpanded{#1}%
1899 \ifx\scrollmode#2\scrollmode
1900 \else
1901 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1902 \HyPsd@fi
1903 }%
1904 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1905 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1906 }%
1907 }

```

6.6.3 Remove grouping braces

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

```

1908 \def\HyPsd@RemoveBraces#1{%
1909 \ifx\scrollmode#1\scrollmode
1910 \else
1911 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1912 \fi
1913 }

```

`\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`.

```

1914 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1915   \fi
1916   \def\Hy@temp@A{#1#2}%
1917   \def\Hy@temp@B{#3}%
1918   \ifx\Hy@temp@A\Hy@temp@B
1919     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1920       \HyPsd@String#1%
1921     }%
1922     \ifx\scrollmode#2\scrollmode
1923     \else
1924       \Hy@ReturnAfterFiFiEnd{%
1925         \HyPsd@RemoveBraces{#2}%
1926       }%
1927     \fi
1928   \else
1929     \def\Hy@temp@A{#1}%
1930     \HyPsd@AppendItalcrr\HyPsd@String
1931     \ifx\Hy@temp@A\@empty
1932       \Hy@ReturnAfterElseFiFiEnd{%
1933         \HyPsd@RemoveBraces{#2}%
1934       }%
1935     \else
1936       \HyPsd@ProtectSpaces\Hy@temp@A
1937       \HyPsd@AppendItalcrr\Hy@temp@A
1938       \Hy@ReturnAfterFiFiEnd{%
1939         \expandafter\HyPsd@RemoveBraces\expandafter
1940           {\Hy@temp@A#2}%
1941       }%
1942     \fi
1943   \fi
1944   \Hy@ReturnEnd
1945 }
```

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

```

1946 \def\HyPsd@AppendItalcrr#1{%
1947   \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1%
1948 }
1949 \def\HyPsd@@AppendItalcrr#1#2{%
1950   \expandafter\def\expandafter#2\expandafter{#2#1}%
1951 }
```

6.6.4 Catcode check

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

```

1952 \ltx@ifundefined{directlua}{%
1953 }{%
1954   \expandafter\ifx\csname\endcsname\relax\fi
```

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`.

```

1956 \begingroup
1957   \catcode`\Q=\active
1958   \let Q\ltx@empty
1959   \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1960     \global\let\HyPsd@Rest\relax
1961     \ifcat\relax\noexpand#1\relax
1962       \ifx#1\protect
1963         \else
1964           \ifx#1\penalty
1965             \setbox\z@=\hbox{%
1966               \afterassignment\HyPsd@AfterCountRemove
1967               \count@=#2\HyPsd@End
1968             }%
1969           \else
1970             \ifx#1\kern
1971               \setbox\z@=\hbox{%
1972                 \afterassignment\HyPsd@AfterDimenRemove
1973                 \dimen@=#2\HyPsd@End
1974               }%
1975             \else
1976               \ifx#1\hskip
1977                 \setbox\z@=\hbox{%
1978                   \afterassignment\HyPsd@AfterSkipRemove
1979                   \skip@=#2\HyPsd@End
1980                 }%
1981               \else
1982                 \HyPsd@CatcodeWarning{#1}%
1983               \fi
1984             \fi
1985           \fi
1986         \fi
1987       \else
1988         \ifcat\noexpand#1\noexpandQ% active character
1989           \expandafter\expandafter\expandafter\def
1990           \expandafter\expandafter\expandafter\HyPsd@String
1991           \expandafter\expandafter\expandafter{%
1992             \expandafter\HyPsd@String\string#1%
1993           }%
1994         \else
1995           \ifcat#1A% letter

```

```

1996     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1997         \HyPsd@String#1%
1998     }%
1999     \else
2000     \ifcat#1 % SPACE
2001         \expandafter\def\expandafter\HyPsd@String\expandafter{%
2002             \HyPsd@String\HyPsd@SPACEOPTI
2003         }%
2004     \else
2005         \ifcat$#1%
2006             \HyPsd@CatcodeWarning{math shift}%
2007         \else
2008             \ifcat&#1%
2009                 \HyPsd@CatcodeWarning{alignment tab}%
2010             \else
2011                 \ifcat^#1%
2012                     \HyPsd@CatcodeWarning{superscript}%
2013                 \else
2014                     \ifcat_#1%
2015                         \HyPsd@CatcodeWarning{subscript}%
2016                     \else
2017                         \expandafter\def\expandafter\HyPsd@String\expandafter{%
2018                             \HyPsd@String#1%
2019                         }%
2020                     \fi
2021                 \fi
2022             \fi
2023         \fi
2024     \fi
2025 \fi
2026 \fi
2027 \fi
2028 \ifx\HyPsd@Rest\relax
2029     \ifx\scrollmode#2\scrollmode
2030     \else
2031         \Hy@ReturnAfterFiFiEnd{%
2032             \HyPsd@CheckCatcodes#2\HyPsd@End
2033         }%
2034     \fi
2035 \else
2036     \ifx\HyPsd@Rest\@empty
2037     \else
2038         \Hy@ReturnAfterFiFiEnd{%
2039             \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2040         }%
2041     \fi
2042 \fi
2043 \Hy@ReturnEnd
2044 }%
2045 \endgroup

```

Remove counts, dimens, skips.

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

```

2046 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2047     \gdef\HyPsd@Rest{#1}%
2048 }

```

`\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.

```

2049 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
2050   \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2051     \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2052     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2053   \else
2054     \ifdim\dimen@=\z@
2055     \else
2056       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2057     \fi
2058     \gdef\HyPsd@Rest{#1}%
2059   \fi
2060 }
```

`\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).

```

2061 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
2062   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
2063     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2064     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2065   \else
2066     \ifdim\skip@=\z@
2067     \else
2068       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2069     \fi
2070     \gdef\HyPsd@Rest{#1}%
2071   \fi
2072 }
```

Catcode warnings.

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

```

2073 \def\HyPsd@CatcodeWarning#1{%
2074   \HyPsd@Warning{%
2075     Token not allowed in a PDF string (%
2076     \ifHy@unicode
2077       Unicode%
2078     \else
2079       PDFDocEncoding%
2080     \fi
2081     ):%
2082     \MessageBreak removing `~\HyPsd@RemoveCmdPrefix#1'%
2083   }%
2084 }
2085 \begingroup
2086   \catcode\|=0 %
2087   \catcode\=12 %
2088   \gdef\HyPsd@RemoveCmdPrefix#1{%
2089     \expandafter\HyPsd@@RemoveCmdPrefix
2090     \string#1\@empty\<>-|\@empty|\@empty
2091   }%
2092   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|\@empty#3|\@empty{#1#2}%
2093 \endgroup
```

\HyPsd@RemoveSpaceWarning

```
2094 \def\HyPsd@RemoveSpaceWarning#1{%
2095   \HyPsd@Warning{%
2096     Token not allowed in a PDF string (%
2097     \ifHy@unicode
2098       Unicode%
2099     \else
2100       PDFDocEncoding%
2101     \fi
2102   ):%
2103   \MessageBreak #1\MessageBreak
2104   removed%
2105 }%
2106 }
```

\HyPsd@ReplaceSpaceWarning

```
2107 \def\HyPsd@ReplaceSpaceWarning#1{%
2108   \HyPsd@Warning{%
2109     Token not allowed in a PDF string (%
2110     \ifHy@unicode
2111       Unicode%
2112     \else
2113       PDFDocEncoding%
2114     \fi
2115   ):%
2116   \MessageBreak #1\MessageBreak
2117   replaced by space%
2118 }%
2119 }
```

6.6.5 Check for wrong glyphs

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

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

```

2143 \HyPsd@Warning{%
2144   Composite letter ``\@backslashchar#1+#2'\MessageBreak
2145   not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2146   \MessageBreak
2147   removing ``\@backslashchar#1'%
2148 }%
2149 \fi
2150 }

```

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`.

```

2151 \def\HyPsd@spaceopti#1{ % first space
2152 \ifx\HyPsd@spaceopti#1%
2153   \040%
2154 \else
2155   #1%
2156 \fi
2157 }%

```

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.

```

2158 \def\HyPsd@Subst#1#2#3{%
2159 \def\HyPsd@@@ReplaceFi##1#1##2\END\fi{%
2160   \fi
2161   ##1%
2162   \ifx\scrollmode##2\scrollmode
2163   \else
2164     #2%
2165     \HyPsd@@@ReplaceFi##2\END
2166   \fi
2167 }%
2168 \xdef#3{%
2169   \iftrue
2170     \expandafter\HyPsd@@@ReplaceFi#3#1\END
2171   \fi
2172 }%
2173 }

```

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

```

2174 \def\HyPsd@StringSubst#1{%
2175 \expandafter\HyPsd@Subst\expandafter{\string#1}%
2176 }

```

`\HyPsd@EscapeTeX`

```

2177 \begingroup

```

```

2178 \lccode`\!=`\%%
2179 \lccode`\|=`\%%
2180 \lccode`\(<`\{%
2181 \lccode`\)=`\}%
2182 \lccode`0=\ltx@zero
2183 \lccode`1=\ltx@zero
2184 \lccode`3=\ltx@zero
2185 \lccode`4=\ltx@zero
2186 \lccode`5=\ltx@zero
2187 \lccode`7=\ltx@zero
2188 \lowercase{\endgroup
2189 \def\HyPsd@EscapeTeX#1{%
2190   \HyPsd@Subst!{|045}#1%
2191   \HyPsd@Subst(|173}#1%
2192   \HyPsd@Subst){|175}#1%
2193 }%
2194 }

```

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.

```

2195 \def\HyPsd@doxspace#1{%
2196   \ifx#1\relax\else
2197     \ifx#1.\else
2198       \ifx#1:\else
2199         \ifx#1,\else
2200           \ifx#1;\else
2201             \ifx#1!\else
2202               \ifx#1?\else
2203                 \ifx#1/\else
2204                   \ifx#1-\else
2205                     \ifx#1'\else
2206                       \HyPsd@SPACEOPTI
2207                     \fi
2208                   \fi
2209                 \fi
2210               \fi
2211             \fi
2212           \fi
2213         \fi
2214       \fi
2215     \fi
2216   \fi
2217   #1%
2218 }%

```

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.

```

2219 \begingroup
2220 \catcode`\|=0 %
2221 \catcode`\|=12 %

```

\HyPsd@ConvertToUnicode

```
2222 |gdef|HyPsd@ConvertToUnicode#1{%
2223 |xdef#1{%
2224 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2225 }%
2226 |ifx#1|@empty
2227 |else
2228 |xdef#1{%
2229 \376\377%
2230 #1%
2231 }%
2232 |fi
2233 }%
```

\HyPsd@DoConvert

```
2234 |gdef|HyPsd@DoConvert#1{%
2235 |ifx#1|@empty
2236 |else
2237 |ltx@ReturnAfterFi{%
2238 |ifx#1\%%
2239 \%%
2240 |expandafter|HyPsd@DoEscape
2241 |else
2242 |HyPsd@Char{#1}%
2243 |expandafter|HyPsd@DoConvert
2244 |fi
2245 }%
2246 |fi
2247 }%
```

\HyPsd@DoEscape

```
2248 |gdef|HyPsd@DoEscape#1{%
2249 |ifx#19%
2250 |expandafter|HyPsd@GetTwoBytes
2251 |else
2252 |ltx@ReturnAfterFi{%
2253 |ifx#18%
2254 00%
2255 |expandafter|HyPsd@GetTwoBytes
2256 |else
2257 #1%
2258 |expandafter|HyPsd@GetOneByte
2259 |fi
2260 }%
2261 |fi
2262 }%
```

\HyPsd@GetTwoBytes

```
2263 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2264 #1\#2#3#4%
2265 |HyPsd@DoConvert
2266 }%
```

\HyPsd@GetOneByte

```
2267 |gdef|HyPsd@GetOneByte#1#2{%
2268 #1#2%
2269 |HyPsd@DoConvert
```



```

2270 }%
2271 |endgroup

\HyPsd@@GetNextTwoTokens TeX does only allow nine parameters, so we need another macro to get more
arguments.
2272 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2273 \xdef#4{#4#1#2}%
2274 \HyPsd@@ConvertToUnicode#3\END#4%
2275 }

\HyPsd@Char
2276 \begingroup
2277 \catcode0=9 %
2278 \catcode`\^=7 %
2279 \catcode`\^^=12 %
2280 \def\x{^^^0000}%
2281 \expandafter\endgroup
2282 \ifx\x\@empty
2283 \def\HyPsd@Char#1{%
2284 \ifnum`#1<128 %
2285 \@backslashchar 000#1%
2286 \else
2287 \ifnum`#1<65536 %
2288 \expandafter\HyPsd@CharTwoByte\number`#1!%
2289 \else
2290 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2291 \intcalcSub{`#1}{65536}!%
2292 \fi
2293 \fi
2294 }%
2295 \def\HyPsd@CharTwoByte#1!{%
2296 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2297 \IntCalcDiv#1!256!!%
2298 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2299 \IntCalcMod#1!256!!%
2300 }%
2301 \def\HyPsd@CharOctByte#1!{%
2302 \@backslashchar
2303 \IntCalcDiv#1!64!%
2304 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2305 \IntCalcMod#1!8!%
2306 }%
2307 \def\HyPsd@CharSurrogate#1!{%
2308 \@backslashchar 33%
2309 \IntCalcDiv#1!262144!%
2310 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2311 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2312 \@backslashchar 33%
2313 \expandafter\expandafter\expandafter\IntCalcAdd
2314 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2315 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2316 \IntCalcMod#1!256!!%
2317 }%
2318 \else
2319 \def\HyPsd@Char#1{%
2320 \@backslashchar 000#1%
2321 }%
2322 \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

2323 \begingroup\expandafter\expandafter\expandafter\endgroup
2324 \expandafter\ifx\csname numexpr\endcsname\relax
2325   \let\HyPsd@UTFviii\relax
2326 \else
2327   \begingroup
2328     \lccode`\~=`^^f4\relax
2329   \lowercase{\endgroup
2330     \def\HyPsd@UTFviii{%
2331       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2332       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2333       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2334       \ifx~\HyPsd@UTFviii@ccxliv@undef
2335         \let~\HyPsd@UTFviii@ccxliv@def
2336       \fi
2337       \let\unichar\HyPsd@unichar
2338     }%
2339   }%
2340   \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2341   \edef\HyPsd@UTFviii@ccxliv@def{%
2342     \noexpand\UTFviii@four@octets\string ^^f4%
2343   }%

```

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.

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

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

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

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

$$(5)$$

```

2344 \def\HyPsd@UTFviii@two#1#2{%
2345   \expandafter\HyPsd@UTFviii@@two
2346   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
2347   \number`#1\expandafter| %
2348   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter| %
2349   \number`#2 \@nil
2350 }%
2351 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2352   \expandafter\8%
2353   \number\numexpr #1-48\expandafter\relax
2354   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2355   \number\numexpr #3-8*%

```

```

2356 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2357 \number\numexpr #4-8*#3\relax
2358 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2359 \def\HyPsd@UTFviii@three#1#2#3{%
2360 \expandafter\HyPsd@UTFviii@@three
2361 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter|
2362 \number`#1\expandafter|
2363 \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter|
2364 \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter|
2365 \number`#2\expandafter|
2366 \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter|
2367 \number`#3 \@nil
2368 }%
2369 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2370 \expandafter\9%
2371 \number\numexpr #1-56\expandafter\relax
2372 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2373 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2374 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2375 \number\numexpr #6-16\expandafter\relax
2376 \number\numexpr #7-8*#6\relax
2377 }%

```

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

```

```

2378 \def\HyPsd@UTFviii@four#1#2{%
2379 \expandafter\HyPsd@@UTFviii@four\number
2380 \numexpr-1+(`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2381 \expandafter|\number
2382 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp|
2383 }%
2384 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2385 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2386 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2387 \ifodd#2 %
2388 \number\numexpr(#2-1)/2\relax
2389 \else
2390 \number\numexpr#2/2\relax
2391 \fi

```

```

2392 \number\numexpr\ifodd#2 4+\fi
2393 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
2394 \933%
2395 \expandafter\HyPsd@@@UTFviii@four\number
2396 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
2397 }%
2398 \def\HyPsd@@@UTFviii@four#1|#2{%
2399 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2400 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2401 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
2402 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
2403 }%

```

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

```

2404 \def\HyPsd@unichar#1{%
2405 \ifHy@unicode
2406 \ifnum#1>"10FFFF %
2407 \HyPsd@UnicodeReplacementCharacter % illegal
2408 \else
2409 \ifnum#1>"FFFF %

```

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

```

2410 \expandafter\HyPsd@unichar\expandafter{%
2411 \number\numexpr 55296+%
2412 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2413 \relax\relax\relax
2414 }%

```

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

```

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

```

```

2443 \def\HyPsd@unichar@first@byte#1{%
2444   \number\dimexpr.015625\dimexpr#1sp\relax\relax
2445   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2446     \number
2447     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2448     \relax\relax\relax
2449   }%
2450 }%
2451 \def\HyPsd@unichar@second@byte#1{%
2452   \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2453   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2454     \number
2455     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2456     \relax\relax\relax
2457   }%
2458 }%
2459 \def\HyPsd@unichar@octtwo#1{%
2460   \number\dimexpr.125\dimexpr#1sp\relax\relax
2461   \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2462   \relax\relax\relax
2463 }%
2464 \fi

```

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

```

2465 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2466   \ifx\@gobble#1%
2467   \else
2468     [Please insert \textbackslash PrerenderUnicode%
2469     \textbraceleft#1\textbraceright\space
2470     into preamble]%
2471   \fi
2472 }%

```

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

\HyPsd@DieFace Die faces are provided by

| Package | Macro |
|---------|----------|
| ifsym | \Cube |
| epsdice | \epsdice |
| hhcount | \fcdice |

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

```

2473 \def\HyPsd@DieFace#1{%
2474   \ifHy@unicode
2475   \ifnum#1<1 %
2476     \HyPsd@UnicodeReplacementCharacter
2477   \else
2478     \ifnum#1>6 %
2479       \9046\205%
2480       \expandafter\expandafter\expandafter
2481       \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2482     \else
2483       \9046\20\intcalcDec{#1}%
2484     \fi

```

```

2485 \fi
2486 \else
2487 .% Die faces are not part of PDFDocEncoding
2488 \fi
2489 }

```

\HyPsd@DieFaceLarge

```

2490 \def\HyPsd@DieFaceLarge#1{%
2491 \ifnum#1>6 %
2492 \expandafter\ltx@firstoftwo
2493 \else
2494 \expandafter\ltx@secondoftwo
2495 \fi
2496 {%
2497 \9046\205%
2498 \expandafter\expandafter\expandafter
2499 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2500 }{%
2501 \9046\20\IntCalcDec#1!%
2502 }%
2503 }

```

6.6.11 Support for moon phases of package china2e

```

2504 \def\HyPsd@MoonPha#1{%
2505 \ifcase\intcalcNum{#1} %
2506 \HyPsd@UnicodeReplacementCharacter
2507 \or % 1
2508 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2509 \9330\074\9337\032%
2510 \or % 2
2511 \HyPsd@UnicodeReplacementCharacter
2512 \or % 3
2513 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2514 \9330\074\9337\035%
2515 \or % 4
2516 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2517 \9330\074\9337\034%
2518 \else
2519 \HyPsd@UnicodeReplacementCharacter
2520 \fi
2521 }
2522 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2523 \def\HyPsd@ding#1{%
2524 \ifHy@unicode
2525 \ifnum#1<32 %
2526 \HyPsd@UnicodeReplacementCharacter
2527 \else
2528 \ifnum#1>254 %
2529 \HyPsd@UnicodeReplacementCharacter
2530 \else
2531 \ifnum#1<127 %
2532 \expandafter\expandafter\expandafter
2533 \HyPsd@@@ding\intcalcNum{#1}!%

```

```

2534     \else
2535     \ifnum#1>160 %
2536     \expandafter\expandafter\expandafter
2537     \HyPsd@@ding\intcalcNum{#1}!%
2538     \else
2539     \HyPsd@UnicodeReplacementCharacter
2540     \fi
2541     \fi
2542     \fi
2543     \fi
2544     \else
2545     .% Dingbats are not part of PDFDocEncoding
2546     \fi
2547 }

```

\HyPsd@@ding

```

2548 \def\HyPsd@@ding#1!{%
2549 \ltx@ifundefined{HyPsd@ding@#1}{%
2550 \ifnum#1<127 %
2551 \9047%
2552 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2553 \else
2554 \ifnum#1<168 %
2555 \9047\14\IntCalcSub#1!160!%
2556 \else
2557 \ifnum#1>181 %
2558 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2559 \else
2560 % 172..181 -> U+2460..U+2469
2561 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2562 \fi
2563 \fi
2564 \fi
2565 }{%
2566 \csname HyPsd@ding@#1\endcsname
2567 }%
2568 }

2569 \@namedef{HyPsd@ding@32}{\space}
2570 % U+260E BLACK TELEPHONE
2571 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2572 % U+261B BLACK RIGHT POINTING INDEX
2573 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2574 % U+261E WHITE RIGHT POINTING INDEX
2575 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2576 % U+2605 BLACK STAR
2577 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2578 % U+25CF BLACK CIRCLE
2579 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2580 % U+25A0 BLACK SQUARE
2581 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2582 % U+25B2 BLACK UP-POINTING TRIANGLE
2583 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2584 % U+25BC BLACK DOWN-POINTING TRIANGLE
2585 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2586 % U+25C6 BLACK DIAMOND
2587 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2588 % U+25D7 RIGHT HALF BLACK CIRCLE

```

```

2589 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2590 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2591 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2592 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2593 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2594 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2595 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2596 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2597 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2598 \@ifclassloaded{memoir}{%
2599   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2600 }{}

```

7.2 Package subfigure

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

```

2601 \@ifpackageloaded{subfigure}{%
2602   \ltx@ifundefined{sub@label}{%
2603     \Hy@hypertextnamesfalse
2604   }{%
2605     \renewcommand*{\sub@label}[1]{%
2606       \@bsphack
2607       \subfig@oldlabel{#1}%
2608       \if@filesw
2609         \begingroup
2610           \edef\@currentlabstr{%
2611             \expandafter\strip@prefix\meaning\@currentlabelname
2612           }%
2613           \protected@write\@auxout{}{%
2614             \string\newlabel{sub@#1}{%
2615               {\@nameuse{\@thesub\@capytype}}%
2616               {\thepage}%
2617             }%
2618             \expandafter\strip@period\@currentlabstr
2619             \relax.\relax\@@@%
2620           }%
2621           {\@currentHref}%
2622           {}%
2623         }%
2624       }%
2625     \endgroup
2626     \fi
2627     \@esphack
2628   }%
2629   \@ifpackagelater{subfigure}{2002/03/26}{%
2630     \providecommand*{\toclevel@subfigure}{1}%
2631     \providecommand*{\toclevel@subtable}{1}%
2632   }%
2633 }{}
2634 }{}

```


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:

```
2635 \ltx@ifundefined{XR@addURL}{%
2636 }{%
```

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.

```
2637 \def\xR@addURL#1{\xR@dURL#1{}{}{}%
2638 \def\xR@dURL#1#2#3#4#5\{%
2639   {#1}{#2}%
2640   \if!#4!%
2641   \else
2642     {#3}{#4}{\xR@URL}%
2643   \fi
2644 }%
2645 }
```

```
2646 \def\Hy@true{true}
2647 \def\Hy@false{false}
```

Providing dummy definitions.

```
2648 \let\literalps@out\@gobble
2649 \newcommand\pdfbookmark[3]{}{}
2650 \def\Acrobatmenu#1#2{\leavevmode#2}
2651 \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

```
2652 \let\HyperRaiseLinkHook\@empty
2653 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2654 \newcount\Hy@SavedSpaceFactor
2655 \def\Hy@SaveSpaceFactor{%
2656   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@
2657 }
2658 \def\Hy@RestoreSpaceFactor{%
2659   \relax
2660   \ifhmode
2661     \ifnum\Hy@SavedSpaceFactor>\z@
2662       \spacefactor=\Hy@SavedSpaceFactor
2663     \fi
2664   \fi
```

```

2665 }
2666 \def\Hy@SaveSavedSpaceFactor{%
2667 \edef\Hy@RestoreSavedSpaceFactor{%
2668 \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2669 }%
2670 }
2671 \def\Hy@raisedlink#1{%
2672 \ifvmode
2673 #1%
2674 \else
2675 \Hy@SaveSpaceFactor
2676 \penalty\@M
2677 \smash{%
2678 \begingroup
2679 \let\HyperRaiseLinkLength\@tempdima
2680 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2681 \HyperRaiseLinkHook
2682 \expandafter\endgroup
2683 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2684 \Hy@RestoreSpaceFactor
2685 #1%
2686 \Hy@SaveSpaceFactor
2687 }%
2688 }%
2689 \Hy@RestoreSpaceFactor
2690 \fi
2691 }

```

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

```

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

```

```

2720         \endgroup
2721         \def\noexpand\Hy@RestoreLastskip{%
2722             \noexpand\ifhmode
2723             \noexpand\nobreak
2724             \hskip\the\skip@
2725             \hskip\the\lastskip\relax
2726             \noexpand\fi
2727         }%
2728     }%
2729     \x
2730 \fi
2731 \fi
2732 \fi
2733 }%

```

9 Options

```

2734 \SetupKeyvalOptions{%
2735     family=Hyp,%
2736     prefix=HyOpt%
2737 }

```

9.1 Help macros

`\IfHyperBooleanExists`

```

2738 \def\IfHyperBooleanExists#1{%
2739     \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2740         \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2741     }%
2742 }

2743 \@namedef{KV@Hyp@stoppeearly@default}{\}

```

`\IfHyperBoolean`

```

2744 \def\IfHyperBoolean#1{%
2745     \IfHyperBooleanExists{#1}{%
2746         \csname ifHy@#1\endcsname
2747         \expandafter\ltx@firstoftwo
2748     \else
2749         \expandafter\ltx@secondoftwo
2750     \fi
2751 } \ltx@secondoftwo
2752 }

```

`\Hy@boolkey`

```

2753 \def\Hy@boolkey#1#2{%
2754     \edef\Hy@tempa{#2}%
2755     \lowercase\expandafter{%
2756         \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2757     }%
2758     \ifx\Hy@tempa\@empty
2759         \let\Hy@tempa\Hy@true
2760     \fi
2761     \ifx\Hy@tempa\Hy@true
2762     \else
2763         \ifx\Hy@tempa\Hy@false
2764         \else

```

```

2765 \let\Hy@tempa\relax
2766 \fi
2767 \fi
2768 \ifx\Hy@tempa\relax
2769 \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}%
2770 \else
2771 \Hy@Info{Option `#1' set ``\Hy@tempa'}%
2772 \csname Hy@#1\Hy@tempa\endcsname
2773 \fi
2774 }

```

\Hy@WarnOptionValue

```

2775 \def\Hy@WarnOptionValue#1#2#3{%
2776 \Hy@Warning{%
2777 Unexpected value `#1'\MessageBreak
2778 of option `#2' instead of\MessageBreak
2779 #3%
2780 }%
2781 }

```

\Hy@DisableOption

```

2782 \def\Hy@realDisableOption#1{%
2783 \ltx@ifundefined{KV@Hyp@#1@default}{%
2784 \define@key{Hyp}{#1}%
2785 }{%
2786 \define@key{Hyp}{#1}[]%
2787 }%
2788 {\Hy@WarnOptionDisabled{#1}}%
2789 }
2790
2791 \def\Hy@DisableOption#1{%
2792 \ifnum\currentgrouplevel>0
2793 \expandafter\@firstoftwo
2794 \else
2795 \expandafter\@secondoftwo
2796 \fi
2797 {%
2798 \expandafter\gdef\csname Hy@smuggleout#1\endcsname{\Hy@DisableOp-
2799 tion{#1}}%
2800 }
2801 {\Hy@realDisableOption{#1}}

```

\Hy@WarnOptionDisabled

```

2802 \def\Hy@WarnOptionDisabled#1{%
2803 \Hy@Warning{%
2804 Option `#1' has already been used,\MessageBreak
2805 setting the option has no effect%
2806 }%
2807 }

```

\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.

```

2808 \def\Hy@CheckOptionValue#1#2#3{%
2809 \begingroup
2810 \edef\x{#1}%

```

```

2811 \@onelevel@sanitize\x
2812 \let\y=y%
2813 \def\do##1##2{%
2814   \def\z{##1}%
2815   \@onelevel@sanitize\z
2816   \ifx\x\z
2817     \let\y=n%
2818     \let\do\@gobbletwo
2819   \fi
2820 }%
2821 #3%
2822 \ifx\y y%
2823   \def\do##1##2{%
2824     * `##1'%
2825     \ifx\\##2\\\else\space(##2)\fi
2826     \MessageBreak
2827   }%
2828   \Hy@Warning{%
2829     Values of option `#2':\MessageBreak
2830     #3%
2831     * An empty value disables the option.\MessageBreak
2832     Unknown value `x'%
2833   }%
2834 \fi
2835 \endgroup
2836 }

```

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

```

2837 \def\Hy@DefNameKey#1{%
2838   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2839 }

```

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

```

2840 \def\Hy@@DefNameKey#1#2#3{%
2841   \define@key{Hyp}{#2}{%
2842     \edef#1{##1}%
2843     \ifx#1\@empty
2844       \else
2845         \Hy@CheckOptionValue{##1}{#2}{#3}%
2846       \fi
2847   }%
2848   \let#1\@empty
2849 }

```

\Hy@UseNameKey

```

2850 \def\Hy@UseNameKey#1#2{%
2851   \ifx#2\@empty
2852     \else
2853       /#1/#2%
2854     \fi
2855 }

```

9.2 Defining the options

```
2856 \define@key{Hyp}{implicit}[true]{%
2857   \Hy@boolkey{implicit}{#1}%
2858 }
2859 \define@key{Hyp}{draft}[true]{%
2860   \Hy@boolkey{draft}{#1}%
2861 }
2862 \define@key{Hyp}{final}[true]{%
2863   \Hy@boolkey{final}{#1}%
2864 }
2865 \let\KV@Hyp@nolinks\KV@Hyp@draft

2866 \def\Hy@ObsoletePaperOption#1{%
2867   \Hy@WarningNoLine{%
2868     Option `#1' is no longer used%
2869   }%
2870   \define@key{Hyp}{#1}[true]{}%
2871 }
2872 \def\Hy@temp#1{%
2873   \define@key{Hyp}{#1}[true]{%
2874     \Hy@ObsoletePaperOption{#1}%
2875   }%
2876 }
2877 \Hy@temp{a4paper}
2878 \Hy@temp{a5paper}
2879 \Hy@temp{b5paper}
2880 \Hy@temp{letterpaper}
2881 \Hy@temp{legalpaper}
2882 \Hy@temp{executivepaper}

2883 \define@key{Hyp}{setpagesize}[true]{%
2884   \Hy@boolkey{setpagesize}{#1}%
2885 }
2886 \define@key{Hyp}{debug}[true]{%
2887   \Hy@boolkey{debug}{#1}%
2888 }
2889 \define@key{Hyp}{linktocpage}[true]{%
2890   \Hy@boolkey{linktocpage}{#1}%
2891   \ifHy@linktocpage
2892     \let\Hy@linktoc\Hy@linktoc@page
2893   \else
2894     \let\Hy@linktoc\Hy@linktoc@section
2895   \fi
2896 }
2897 \chardef\Hy@linktoc@none=0 %
2898 \chardef\Hy@linktoc@section=1 %
2899 \chardef\Hy@linktoc@page=2 %
2900 \chardef\Hy@linktoc@all=3 %
2901 \ifHy@linktocpage
2902   \let\Hy@linktoc\Hy@linktoc@page
2903 \else
2904   \let\Hy@linktoc\Hy@linktoc@section
2905 \fi
2906 \define@key{Hyp}{linktoc}{%
2907   \@ifundefined{Hy@linktoc@#1}{%
2908     \Hy@Warning{%
2909       Unexpected value `#1' of\MessageBreak
2910       option `linktoc' instead of `none',\MessageBreak
```

```

2911     `section', `page' or `all'%
2912   }%
2913 }{%
2914   \expandafter\let\expandafter\Hy@linktoc
2915   \csname Hy@linktoc@#1\endcsname
2916 }%
2917 }
2918 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2919 \let\XR@ext\relax
2920 \define@key{Hyp}{verbose}[true]{%
2921   \Hy@boolkey{verbose}{#1}%
2922 }
2923 \define@key{Hyp}{typexml}[true]{%
2924   \Hy@boolkey{typexml}{#1}%
2925 }

```

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.

```

2926 \define@key{Hyp}{raiselinks}[true]{%
2927   \Hy@boolkey{raiselinks}{#1}%
2928 }

```

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

```

2929 \def\Hy@setbreaklinks#1{%
2930   \csname breaklinks#1\endcsname
2931 }
2932 \def\Hy@breaklinks@unsupported{%
2933   \ifx\Hy@setbreaklinks\@gobble
2934     \ifHy@breaklinks
2935       \Hy@WarningNoLine{%
2936         You have enabled option `breaklinks'.\MessageBreak
2937         But driver ``Hy@driver.def' does not support this.\MessageBreak
2938         Expect trouble with the link areas of broken links%
2939       }%
2940     \fi
2941   \fi
2942 }
2943 \define@key{Hyp}{breaklinks}[true]{%
2944   \Hy@boolkey{breaklinks}{#1}%
2945   \let\Hy@setbreaklinks\@gobble
2946 }
2947 \define@key{Hyp}{localanchorname}[true]{%
2948   \Hy@boolkey{localanchorname}{#1}%
2949 }

```

Determines whether an automatic anchor is put on each page

```

2950 \define@key{Hyp}{pageanchor}[true]{%
2951   \Hy@boolkey{pageanchor}{#1}%
2952 }

```

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.

```

2953 \define@key{Hyp}{plainpages}[true]{%
2954   \Hy@boolkey{plainpages}{#1}%
2955 }

```

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

```
2956 \define@key{Hyp}{naturalnames}[true]{%
2957   \Hy@boolkey{naturalnames}{#1}%
2958 }
```

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

```
2959 \define@key{Hyp}{hypertexnames}[true]{%
2960   \Hy@boolkey{hypertexnames}{#1}%
2961 }
```

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

```
2962 \define@key{Hyp}{nesting}[true]{%
2963   \Hy@boolkey{nesting}{#1}%
2964 }

2965 \define@key{Hyp}{destlabel}[true]{%
2966   \Hy@boolkey{destlabel}{#1}%
2967 }

2968 \define@key{Hyp}{unicode}[true]{%
2969   \Hy@boolkey{unicode}{#1}%
2970   \ifHy@unicode
2971     \def\HyPsd@pdfencoding{unicode}%
2972     \HyPsd@LoadUnicode
2973   \else
2974     \def\HyPsd@pdfencoding{pdfdoc}%
2975   \fi
2976 }

2977 \Hy@AtBeginDocument{%
2978   \ifx\HyPsd@LoadUnicode\relax
2979   \else
2980     \def\HyPsd@LoadUnicode{%
2981       \Hy@Error{%
2982         Unicode support for bookmarks is not available.\MessageBreak
2983         Activate unicode support by using one of the options\MessageBreak
2984         `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2985         in the preamble%
2986       }\@ehc
2987       \global\let\HyPsd@LoadUnicode\relax
2988       \global\Hy@unicodetrue
2989       \global\let\Hy@unicodetrue\Hy@unicodetrue
2990     }%
2991   \fi
2992 }

2993 \define@key{Hyp}{pdfencoding}{%
2994   \edef\HyPsd@temp{#1}%
2995   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2996     \let\HyPsd@pdfencoding\HyPsd@temp
2997     \Hy@unicodetrue
2998   \else
2999     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
3000       \z@
3001     \else
3002       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
3003         \z@
3004       \else
```



```

3005         \@ne
3006     \fi
3007 \fi
3008 \let\HyPsd@pdfencoding\HyPsd@temp
3009 \hypersetup{unicode}%
3010 \ifHy@unicode
3011     \def\HyPsd@pdfencoding{#1}%
3012     \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
3013         \HyPsd@LoadStringEnc
3014     \fi
3015 \else
3016     \Hy@Warning{Cannot switch to unicode bookmarks}%
3017     \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3018 \fi
3019 \else
3020     \@onelevel@sanitize\HyPsd@temp
3021     \Hy@Warning{%
3022         Values of option `pdfencoding':\MessageBreak
3023         `pdfdoc', `unicode', `auto'.\MessageBreak
3024         Ignoring unknown value `\HyPsd@temp'%
3025     }%
3026 \fi
3027 \fi
3028 }
3029 \def\HyPsd@pdfencoding@auto{auto}
3030 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3031 \def\HyPsd@pdfencoding@unicode{unicode}
3032 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3033 \def\HyPsd@LoadStringEnc{%
3034     \RequirePackage{stringenc}[2009/12/15]%
3035     \let\HyPsd@LoadStringEnc\relax
3036 }
3037 \Hy@AtBeginDocument{%
3038     \@ifpackageloaded{stringenc}{%
3039         \let\HyPsd@LoadStringEnc\relax
3040     }{%
3041         \def\HyPsd@LoadStringEnc{%
3042             \Hy@WarningNoLine{%
3043                 Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
3044                 in the preamble or load the package there%
3045             }%
3046         }%
3047     }%
3048 }
3049 \define@key{Hyp}{psdextra}[true]{%
3050     \Hy@boolkey{psdextra}{#1}%
3051     \HyPsd@LoadExtra
3052 }
3053 \def\hypersetup{\kvsetkeys{Hyp}}
3054 \newif\ifHy@setpdfversion
3055 \define@key{Hyp}{pdfversion}{%
3056     \@ifundefined{Hy@pdfversion@#1}{%
3057         \PackageWarning{hyperref}{%
3058             Unsupported PDF version `#1'.\MessageBreak
3059             Valid values: 1.2 until 1.9%
3060         }%

```

```

3061 }{%
3062   \Hy@setpdfversiontrue
3063   \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3064 }%
3065 }
3066 \@namedef{Hy@pdfversion@1.2}{2}%
3067 \@namedef{Hy@pdfversion@1.3}{3}%
3068 \@namedef{Hy@pdfversion@1.4}{4}%
3069 \@namedef{Hy@pdfversion@1.5}{5}%
3070 \@namedef{Hy@pdfversion@1.6}{6}%
3071 \@namedef{Hy@pdfversion@1.7}{7}%
3072 \@namedef{Hy@pdfversion@1.8}{8}%
3073 \@namedef{Hy@pdfversion@1.9}{9}%
3074 \def\Hy@pdfversion{5}

```

10 Options for different drivers

```

3075 \newif\ifHy@DviMode
3076 \let\Hy@DviErrMsg\ltx@empty
3077 \ifpdf
3078   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3079 \else
3080   \ifxetex
3081     \def\Hy@DviErrMsg{XeTeX is running}%
3082   \else
3083     \ifvtex
3084       \ifvtexdvi
3085         \Hy@DviModetrue
3086       \else
3087         \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3088       \fi
3089     \else
3090       \Hy@DviModetrue
3091     \fi
3092   \fi
3093 \fi
3094 \def\HyOpt@CheckDvi#1{%
3095   \ifHy@DviMode
3096     \expandafter\ltx@firstofone
3097   \else
3098     \Hy@Error{%
3099       Wrong DVI mode driver option `#1',\MessageBreak
3100       because \Hy@DviErrMsg
3101     }\@ehc
3102     \expandafter\ltx@gobble
3103   \fi
3104 }
3105 \DeclareVoidOption{tex4ht}{%
3106   \Hy@texhttrue
3107   \kvsetkeys{Hyp}{colorlinks=true}%
3108   \def\BeforeTeXIVht{\RequirePackage{color}}%
3109   \def\Hy@driver{htex4ht}%
3110   \def\MaybeStopEarly{%
3111     \Hy@Message{Stopped early}}%
3112   \Hy@AtBeginDocument{%
3113     \PDF@FinishDoc
3114     \gdef\PDF@FinishDoc{}}%

```

```

3115 }%
3116 \endinput
3117 }%
3118 }
3119 \DeclareVoidOption{pdftex}{%
3120 \ifpdf
3121 \def\Hy@driver{hpdftex}%
3122 \PassOptionsToPackage{pdftex}{color}%
3123 \else
3124 \Hy@Error{%
3125 Wrong driver option `pdftex',\MessageBreak
3126 because pdfTeX in PDF mode is not detected%
3127 }\@ehc
3128 \fi
3129 }
3130 \DeclareVoidOption{luatex}{%
3131 \ifpdf
3132 \ifx\pdfextension\@undefined
3133 \def\Hy@driver{hpdftex}%
3134 \PassOptionsToPackage{pdftex}{color}%
3135 \else
3136 \def\Hy@driver{hluatex}%
3137 \PassOptionsToPackage{luatex}{color}%
3138 \fi
3139 \else
3140 \Hy@Error{%
3141 Wrong driver option `luatex',\MessageBreak
3142 because luaTeX in PDF mode is not detected%
3143 }\@ehc
3144 \fi
3145 }
3146 \DeclareVoidOption{nativepdf}{%
3147 \HyOpt@CheckDvi{nativepdf}{%
3148 \def\Hy@driver{hdvips}%
3149 \PassOptionsToPackage{dvips}{color}%
3150 }%
3151 }
3152 \DeclareVoidOption{dvipdfm}{%
3153 \HyOpt@CheckDvi{dvipdfm}{%
3154 \def\Hy@driver{hdvipdfm}%
3155 }%
3156 }
3157 \DeclareVoidOption{dvipdfmx}{%
3158 \HyOpt@CheckDvi{dvipdfmx}{%
3159 \def\Hy@driver{hdvipdfm}%
3160 \PassOptionsToPackage{dvipdfmx}{color}%
3161 }%
3162 }
3163 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3164 \expandafter\ifx\csname if#1\expandafter\endcsname
3165 \csname iftrue\endcsname
3166 \chardef\SpecialDvipdfmxOutlineOpen\@ne
3167 \else
3168 \chardef\SpecialDvipdfmxOutlineOpen\z@
3169 \fi
3170 }
3171 \DeclareVoidOption{xetex}{%

```

```

3172 \ifxetex
3173   \def\Hy@driver{hxtex}%
3174 \else
3175   \Hy@Error{%
3176     Wrong driver option `xetex',\MessageBreak
3177     because XeTeX is not detected%
3178   }\@ehc
3179 \fi
3180 }
3181 \DeclareVoidOption{pdfmark}{%
3182   \HyOpt@CheckDvi{pdfmark}{%
3183     \def\Hy@driver{hdvips}%
3184   }%
3185 }
3186 \DeclareVoidOption{dvips}{%
3187   \HyOpt@CheckDvi{dvips}{%
3188     \def\Hy@driver{hdvips}%
3189     \PassOptionsToPackage{dvips}{color}%
3190   }%
3191 }
3192 \DeclareVoidOption{hypertex}{%
3193   \HyOpt@CheckDvi{hypertex}{%
3194     \def\Hy@driver{hypertex}%
3195   }%
3196 }
3197 \let\Hy@MaybeStopNow\relax
3198 \DeclareVoidOption{vtex}{%
3199   \ifvtex
3200     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3201     \def\Hy@driver{hvtex}%
3202   \else
3203     \ifnum\OpMode=10\relax
3204       \def\Hy@driver{hvtexhtm}%
3205       \def\MaybeStopEarly{%
3206         \Hy@Message{Stopped early}%
3207         \Hy@AtBeginDocument{%
3208           \PDF@FinishDoc
3209           \gdef\PDF@FinishDoc{}%
3210         }%
3211       \endinput
3212     }%
3213   \else
3214     \Hy@Error{%
3215       Wrong driver option `vtex',\MessageBreak
3216       because of wrong OpMode (\the\OpMode)%
3217     }\@ehc
3218   \fi
3219 \fi
3220 \else
3221   \Hy@Error{%
3222     Wrong driver option `vtex',\MessageBreak
3223     because VTeX is not running%
3224   }\@ehc
3225 \fi
3226 }
3227 \DeclareVoidOption{vtxpdfmark}{%
3228   \ifvtex

```

```

3229 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3230 \def\Hy@driver{hvtexmrk}%
3231 \else
3232 \Hy@Error{%
3233   Wrong driver option `vtexpdfmark',\MessageBreak
3234   because of wrong OpMode (\the\OpMode)%
3235 } \@ehc
3236 \fi
3237 \else
3238 \Hy@Error{%
3239   Wrong driver option `vtexpdfmark',\MessageBreak
3240   because VTeX is not running%
3241 } \@ehc
3242 \fi
3243 }
3244 \DeclareVoidOption{dviwindo}{}%
3245 \HyOpt@CheckDvi{dviwindo}{}%
3246 \def\Hy@driver{hdvwind}%
3247 \kvsetkeys{Hyp}{colorlinks}%
3248 \PassOptionsToPackage{dviwindo}{color}%
3249 }%
3250 }
3251 \DeclareVoidOption{dvipsone}{}%
3252 \HyOpt@CheckDvi{dvipsone}{}%
3253 \def\Hy@driver{hdvipson}%
3254 \PassOptionsToPackage{dvipsone}{color}%
3255 }%
3256 }
3257 \DeclareVoidOption{textures}{}%
3258 \HyOpt@CheckDvi{textures}{}%
3259 \def\Hy@driver{htexture}%
3260 }%
3261 }
3262 \DeclareVoidOption{latex2html}{}%
3263 \HyOpt@CheckDvi{latex2html}{}%
3264 \Hy@AtBeginDocument{\@@@latextohtmlX}%
3265 }%
3266 }

```

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

```

3267 \DeclareVoidOption{ps2pdf}{}%
3268 \HyOpt@CheckDvi{ps2pdf}{}%
3269 \def\Hy@driver{hdvips}%
3270 \PassOptionsToPackage{dvips}{color}%
3271 }%
3272 }
3273 \let\HyOpt@DriverFallback\ltx@empty
3274 \define@key{Hyp}{driverfallback}{}%
3275 \ifHy@DviMode
3276 \def\HyOpt@DriverFallback{#1}%
3277 \Hy@Match\HyOpt@DriverFallback{}{%
3278   ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3279   latex2html|tex4ht)$%
3280 }{}{%
3281   \Hy@Warning{%
3282     Invalid driver `#1' for option\MessageBreak
3283     `driverfallback'%
3284   }%

```

```

3285 \let\HyOpt@DriverFallback\ltx@empty
3286 }%
3287 \fi
3288 }

3289 \let\HyOpt@CustomDriver\ltx@empty
3290 \define@key{Hyp}{customdriver}{%
3291 \IfFileExists{#1.def}{%
3292 \def\HyOpt@CustomDriver{#1}%
3293 }{%
3294 \Hy@Warning{%
3295 Missing driver file `#1.def',\MessageBreak
3296 ignoring custom driver%
3297 }%
3298 }%
3299 }

```

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.

```

3300 \define@key{Hyp}{hyperfigures}[true]{%
3301 \Hy@boolkey{hyperfigures}{#1}%
3302 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

3303 \define@key{Hyp}{hyperfootnotes}[true]{%
3304 \Hy@boolkey{hyperfootnotes}{#1}%
3305 }

```

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

```

3306 \def\back@none{none}
3307 \def\back@section{section}
3308 \def\back@page{page}
3309 \def\back@slide{slide}
3310 \define@key{Hyp}{backref}[section]{%
3311 \lowercase{\def\Hy@tempa{#1}}%
3312 \ifx\Hy@tempa\@empty
3313 \let\Hy@tempa\back@section
3314 \fi
3315 \ifx\Hy@tempa\Hy@false
3316 \let\Hy@tempa\back@none
3317 \fi
3318 \ifx\Hy@tempa\back@slide
3319 \let\Hy@tempa\back@section
3320 \fi
3321 \ifx\Hy@tempa\back@page
3322 \PassOptionsToPackage{hyperpageref}{backref}%
3323 \Hy@backreftrue
3324 \else
3325 \ifx\Hy@tempa\back@section
3326 \PassOptionsToPackage{hyperref}{backref}%
3327 \Hy@backreftrue
3328 \else
3329 \ifx\Hy@tempa\back@none
3330 \Hy@backreffalse
3331 \else
3332 \Hy@WarnOptionValue{#1}{backref}{%

```

```

3333         `section', `slide', `page', `none',\MessageBreak
3334         or `false'}%
3335     \fi
3336 \fi
3337 \fi
3338 }
3339 \define@key{Hyp}{pagebackref}[true]{%
3340 \edef\Hy@tempa{#1}%
3341 \lowercase\expandafter{%
3342 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3343 }%
3344 \ifx\Hy@tempa\@empty
3345 \let\Hy@tempa\Hy@true
3346 \fi
3347 \ifx\Hy@tempa\Hy@true
3348 \PassOptionsToPackage{hyperpageref}{backref}%
3349 \Hy@backreftrue
3350 \else
3351 \ifx\Hy@tempa\Hy@false
3352 \Hy@backreffalse
3353 \else
3354 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
3355 \fi
3356 \fi
3357 }

```

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

```

3358 \define@key{Hyp}{hyperindex}[true]{%
3359 \Hy@boolkey{hyperindex}{#1}%
3360 }

```

Configuration of encap char.

```

3361 \define@key{Hyp}{encap}[|]{%
3362 \def\HyInd@EncapChar{#1}%
3363 }

```

12 Language options

The \autoref feature depends on the language.

```

3364 \def\HyLang@afrikaans{%
3365 \def\equationautorefname{Vergelyking}%
3366 \def\footnoteautorefname{Voetnota}%
3367 \def\itemautorefname{Item}%
3368 \def\figureautorefname{Figuur}%
3369 \def\tableautorefname{Tabel}%
3370 \def\partautorefname{Deel}%
3371 \def\appendixautorefname{Bylae}%
3372 \def\chapterautorefname{Hoofstuk}%
3373 \def\sectionautorefname{Afdeling}%
3374 \def\subsectionautorefname{Subafdeling}%
3375 \def\subsubsectionautorefname{Subsubafdeling}%
3376 \def\paragraphautorefname{Paragraaf}%
3377 \def\subparagraphautorefname{Subparagraaf}%
3378 \def\FancyVerbLineautorefname{Lyn}%
3379 \def\theoremautorefname{Teorema}%
3380 \def\pageautorefname{Bladsy}%

```

```

3381 }
3382 \def\HyLang@english{%
3383   \def\equationautorefname{Equation}%
3384   \def\footnoteautorefname{footnote}%
3385   \def\itemautorefname{item}%
3386   \def\figureautorefname{Figure}%
3387   \def\tableautorefname{Table}%
3388   \def\partautorefname{Part}%
3389   \def\appendixautorefname{Appendix}%
3390   \def\chapterautorefname{chapter}%
3391   \def\sectionautorefname{section}%
3392   \def\subsectionautorefname{subsection}%
3393   \def\subsubsectionautorefname{subsubsection}%
3394   \def\paragraphautorefname{paragraph}%
3395   \def\subparagraphautorefname{subparagraph}%
3396   \def\FancyVerbLineautorefname{line}%
3397   \def\theoremautorefname{Theorem}%
3398   \def\pageautorefname{page}%
3399 }
3400 \def\HyLang@french{%
3401   \def\equationautorefname{'Equation}%
3402   \def\footnoteautorefname{note}%
3403   \def\itemautorefname{item}%
3404   \def\figureautorefname{Figure}%
3405   \def\tableautorefname{Tableau}%
3406   \def\partautorefname{Partie}%
3407   \def\appendixautorefname{Appendice}%
3408   \def\chapterautorefname{chapitre}%
3409   \def\sectionautorefname{section}%
3410   \def\subsectionautorefname{sous-section}%
3411   \def\subsubsectionautorefname{sous-sous-section}%
3412   \def\paragraphautorefname{paragraphe}%
3413   \def\subparagraphautorefname{sous-paragraphe}%
3414   \def\FancyVerbLineautorefname{ligne}%
3415   \def\theoremautorefname{Th\'eor\`eme}%
3416   \def\pageautorefname{page}%
3417 }
3418 \def\HyLang@german{%
3419   \def\equationautorefname{Gleichung}%
3420   \def\footnoteautorefname{Fu\ss note}%
3421   \def\itemautorefname{Punkt}%
3422   \def\figureautorefname{Abbildung}%
3423   \def\tableautorefname{Tabelle}%
3424   \def\partautorefname{Teil}%
3425   \def\appendixautorefname{Anhang}%
3426   \def\chapterautorefname{Kapitel}%
3427   \def\sectionautorefname{Abschnitt}%
3428   \def\subsectionautorefname{Unterabschnitt}%
3429   \def\subsubsectionautorefname{Unterunterabschnitt}%
3430   \def\paragraphautorefname{Absatz}%
3431   \def\subparagraphautorefname{Unterabsatz}%
3432   \def\FancyVerbLineautorefname{Zeile}%
3433   \def\theoremautorefname{Theorem}%
3434   \def\pageautorefname{Seite}%
3435 }
3436 \def\HyLang@italian{%
3437   \def\equationautorefname{Equazione}%

```



```

3438 \def\footnoteautorefname{nota}%
3439 \def\itemautorefname{punto}%
3440 \def\figureautorefname{Figura}%
3441 \def\tableautorefname{Tabella}%
3442 \def\partautorefname{Parte}%
3443 \def\appendixautorefname{Appendice}%
3444 \def\chapterautorefname{Capitolo}%
3445 \def\sectionautorefname{sezione}%
3446 \def\subsectionautorefname{sottosezione}%
3447 \def\subsubsectionautorefname{sottosottosezione}%
3448 \def\paragraphautorefname{paragrafo}%
3449 \def\subparagraphautorefname{sottoparagrafo}%
3450 \def\FancyVerbLineautorefname{linea}%
3451 \def\theoremautorefname{Teorema}%
3452 \def\pageautorefname{Pag.\@}%
3453 }
3454 \def\HyLang@magyar{%
3455 \def\equationautorefname{Egyenlet}%
3456 \def\footnoteautorefname{l'abjegyzet}%
3457 \def\itemautorefname{Elem}%
3458 \def\figureautorefname{'Abra}%
3459 \def\tableautorefname{T'abl'azat}%
3460 \def\partautorefname{R'esz}%
3461 \def\appendixautorefname{F'uggel'ek}%
3462 \def\chapterautorefname{fejezet}%
3463 \def\sectionautorefname{szakasz}%
3464 \def\subsectionautorefname{alszakasz}%
3465 \def\subsubsectionautorefname{alalszakasz}%
3466 \def\paragraphautorefname{bekezd'es}%
3467 \def\subparagraphautorefname{albekezd'es}%
3468 \def\FancyVerbLineautorefname{sor}%
3469 \def\theoremautorefname{T'etel}%
3470 \def\pageautorefname{oldal}%
3471 }
3472 \def\HyLang@portuges{%
3473 \def\equationautorefname{Equa\c c\~ao}%
3474 \def\footnoteautorefname{Nota de rodap'e}%
3475 \def\itemautorefname{Item}%
3476 \def\figureautorefname{Figura}%
3477 \def\tableautorefname{Tabela}%
3478 \def\partautorefname{Parte}%
3479 \def\appendixautorefname{Ap\~endice}%
3480 \def\chapterautorefname{Cap\~itulo}%
3481 \def\sectionautorefname{Se\c c\~ao}%
3482 \def\subsectionautorefname{Subse\c c\~ao}%
3483 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3484 \def\paragraphautorefname{par'agrafo}%
3485 \def\subparagraphautorefname{subpar'agrafo}%
3486 \def\FancyVerbLineautorefname{linha}%
3487 \def\theoremautorefname{Teorema}%
3488 \def\pageautorefname{P'agina}%
3489 }

```

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`.

```
3490 \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`?

```
3491 \def\equationautorefname{\cyr\cyrp\cyrr\cyrry\cyrry}%
```

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`.

```
3492 % \def\equationautorefname{%
```

```
3493 % \cyr\cyrp\cyrr\cyrry\cyrr\cyra\cyrzh\cyre\cyrn\cyri\cyre
```

```
3494 % }%
```

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

```
3495 \def\footnoteautorefname{%
```

```
3496 \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
```

```
3497 }%
```

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}`”

```
3498 % \def\footnoteautorefname{%
```

```
3499 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
```

```
3500 % \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
```

```
3501 % }%
```

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

```
3502 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
```

```
3503 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%
```

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

```
3504 \def\itemautorefname{\cyr\cyrp}%
```

```
3505 % \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.

```
3506 \def\figureautorefname{\cyr\cyrr\cyri\cyrs}%
```

```
3507 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl}%
```

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

```
3508 \def\partautorefname{\cyr\cyrch}%
```

```
3509 \def\chapterautorefname{\cyr\cyrg\cyrl}%
```

```
3510 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd}%
```

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

```
3511 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl}%
```

```
3512 % \def\appendixautorefname{%
```

```

3513 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrh\cyre\cyrn\cyri\cyre
3514 % }%

```

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.

```

3515 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3516 \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.

```

3517 \def\paragraphautorefname{\cyr\cyrp.}%
3518 \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.

```

3519 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3520 % \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.

```

3521 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```

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

```

3522 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3523 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

```

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

```

3524 % \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 ...

```

3525 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%

```

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

```

3526 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3527 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%

```

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

```

3528 \def\pageautorefname{\cyr\cyrs.}%
3529 }

```

```

3530 \def\HyLang@spanish{%
3531 \def\equationautorefname{Ecuaci'on}%
3532 \def\footnoteautorefname{Nota a pie de p'agina}%
3533 \def\itemautorefname{Elemento}%
3534 \def\figureautorefname{Figura}%
3535 \def\tableautorefname{Tabla}%
3536 \def\partautorefname{Parte}%
3537 \def\appendixautorefname{Ap'endice}%
3538 \def\chapterautorefname{Cap'itulo}%
3539 \def\sectionautorefname{Secci'on}%
3540 \def\subsectionautorefname{Subsecci'on}%

```

```

3541 \def\subsubsectionautorefname{Subsubsecci\`on}%
3542 \def\paragraphautorefname{P\`arrafo}%
3543 \def\subparagraphautorefname{Subp\`arrafo}%
3544 \def\FancyVerbLineautorefname{L\`inea}%
3545 \def\theoremautorefname{Teorema}%
3546 \def\pageautorefname{P\`agina}%
3547 }

3548 \def\HyLang@catalan{%
3549 \def\equationautorefname{Equaci\`o}%
3550 \def\footnoteautorefname{Nota al peu de p\`agina}%
3551 \def\itemautorefname{Element}%
3552 \def\figureautorefname{Figura}%
3553 \def\tableautorefname{Taula}%
3554 \def\partautorefname{Part}%
3555 \def\appendixautorefname{Ap\`endix}%
3556 \def\chapterautorefname{Cap\`itol}%
3557 \def\sectionautorefname{Secci\`o}%
3558 \def\subsectionautorefname{Subsecci\`o}%
3559 \def\subsubsectionautorefname{Subsubsecci\`o}%
3560 \def\paragraphautorefname{Par\`agraf}%
3561 \def\subparagraphautorefname{Subpar\`agraf}%
3562 \def\FancyVerbLineautorefname{L\`inia}%
3563 \def\theoremautorefname{Teorema}%
3564 \def\pageautorefname{P\`agina}%
3565 }

3566 \def\HyLang@vietnamese{%
3567 \def\equationautorefname{Ph\`uhorn\`ohorn\`ng tr\`inh}%
3568 \def\footnoteautorefname{Ch\`u th\`ich}%
3569 \def\itemautorefname{m\`d\`u\`c}%
3570 \def\figureautorefname{H\`inh}%
3571 \def\tableautorefname{B\`h\`a\`ng}%
3572 \def\partautorefname{Ph\`acircumflex\`n}%
3573 \def\appendixautorefname{Ph\`d\`u\`l\`d\`u\`c}%
3574 \def\chapterautorefname{ch\`uhorn\`ohorn\`ng}%
3575 \def\sectionautorefname{m\`d\`u\`c}%
3576 \def\subsectionautorefname{m\`d\`u\`c}%
3577 \def\subsubsectionautorefname{m\`d\`u\`c}%
3578 \def\paragraphautorefname{\`dj\`o\`d\`a\`n}%
3579 \def\subparagraphautorefname{\`dj\`o\`d\`a\`n}%
3580 \def\FancyVerbLineautorefname{d\`ong}%
3581 \def\theoremautorefname{DJ\`d\`i\`nh l\`y}%
3582 \def\pageautorefname{Trang}%
3583 }

```

Greek, see github issue 52

```

3584 \def\HyLang@greek{%
3585 \def\equationautorefname{\textEpsilon\textxi\acconos\textiota\textsigma\textomega\textsigma\texteta}%
3586 \def\footnoteautorefname{\textupsilon\textpi\textomicron\textsigma\texteta\textmu\textepsilon\acconos\textiota\textomega\textsigma\texteta}%
3587 \def\itemautorefname{\textalpha\textnu\texttau\textiota\textkappa\textepsilon\acconos\textiota\textmu\textepsilon\textnu\textomicron}%
3588 \def\figureautorefname{\textSigma\textchi\acconos\texteta\textmu\textalpha}%
3589 \def\tableautorefname{\textPi\acconos\textiota\textnu\textalpha\textkappa\textalpha}%

```

```

3590 \def\partautorefname{\textMu\acconos\textepsilon\textrho\textomicron\textvar-
sigma}%
3591 \def\appendixautorefname{\textPi\textalpha\textrho\acconos\textalpha\text-
rho\texttau\texteta\textmu\textalpha}%
3592 \def\chapterautorefname{\textkappa\textepsilon\textphi\acconos\textal-
pha\textlambda\textalpha\textiota\textomicron}%
3593 \def\sectionautorefname{\textepsilon\textnu\acconos\textomicron\texttau\text-
eta\texttau\textalpha}%
3594 \def\subsectionautorefname{\textupsilon\textpi\textomicron\textepsilon\textnu\ac-
conos\textomicron\texttau\texteta\texttau\textalpha}%
3595 \def\subsubsectionautorefname{\textupsilon\textpi\textomicron\textupsilon\textpi\textomicron\text-
epsilon\texttau\texteta\textmu\textalpha}%
3596 \def\paragraphautorefname{\textpi\textalpha\textrho\acconos\textalpha\textgamma\text-
rho\textalpha\textphi\textomicron\textvarsigma}%
3597 \def\subparagraphautorefname{\textupsilon\textpi\textomicron\textpi\textalpha\textrho\acconos\textalpha\textgamma\textrho\textalpha\textphi\textomi-
cron\textvarsigma}%
3598 \def\FancyVerbLineautorefname{\textgamma\textrho\textalpha\textmu\textmu\ac-
conos\texteta}%
3599 \def\theoremautorefname{\textTheta\textepsilon\acconos\textomega\text-
rho\texteta\textmu\textalpha}%
3600 \def\pageautorefname{\textsigma\textepsilon\textlambda\acconos\textiota\textdelta\text-
alpha}%
3601 }

3602 \def\HyLang@dutch{%
3603 \def\equationautorefname{Vergelijking}%
3604 \def\footnoteautorefname{voetnoot}%
3605 \def\itemautorefname{punt}%
3606 \def\figureautorefname{Figuur}%
3607 \def\tableautorefname{Tabel}%
3608 \def\partautorefname{Deel}%
3609 \def\appendixautorefname{Bijlage}%
3610 \def\chapterautorefname{hoofdstuk}%
3611 \def\sectionautorefname{paragraaf}%
3612 \def\subsectionautorefname{deelparagraaf}%
3613 \def\subsubsectionautorefname{deel-deelparagraaf}%
3614 \def\paragraphautorefname{alinea}%
3615 \def\subparagraphautorefname{deelalinea}%
3616 \def\FancyVerbLineautorefname{regel}%
3617 \def\theoremautorefname{Stelling}%
3618 \def\pageautorefname{pagina}%
3619 }

```

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

```

3620 \def\HyLang@addto#1#2{%
3621 #2%
3622 \@temptokena{#2}%
3623 \ifx#1\relax
3624 \let#1\@empty
3625 \fi
3626 \ifx#1\@undefined
3627 \edef#1{\the\@temptokena}%
3628 \else
3629 \toks@\expandafter{#1}%
3630 \edef#1{\the\toks@\the\@temptokena}%
3631 \fi
3632 \@temptokena{}\toks@\@temptokena

```

```

3633 }
3634 \def\HyLang@DeclareLang#1#2#3{%
3635   \@ifpackagewith{babel}{#1}{%
3636     \expandafter\HyLang@addto
3637     \csname extras#1\expandafter\endcsname
3638     \csname HyLang@#2\endcsname
3639     \begingroup
3640     \edef\x{\endgroup
3641       #3%
3642     }%
3643     \x
3644     \@namedef{HyLang@#1@done}{}%
3645   }{%
3646     \begingroup
3647     \edef\x##1##2{%
3648       \noexpand\ifx##2\relax
3649         \errmessage{No definitions for language #2' found!}%
3650       \noexpand\fi
3651     \endgroup
3652     \noexpand\define@key{Hyp}{#1}[]{%
3653       \noexpand\@ifundefined{HyLang@#1@done}{%
3654         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3655         #3%
3656         \noexpand\@namedef{HyLang@#1@done}{}%
3657       }{%
3658       }%
3659     }%
3660     \expandafter\x\csname extras#1\expandafter\endcsname
3661     \csname HyLang@#2\endcsname
3662 }
3663 \HyLang@DeclareLang{english}{english}{}
3664 \HyLang@DeclareLang{UKenglish}{english}{}
3665 \HyLang@DeclareLang{british}{english}{}
3666 \HyLang@DeclareLang{USenglish}{english}{}
3667 \HyLang@DeclareLang{american}{english}{}
3668 \HyLang@DeclareLang{german}{german}{}
3669 \HyLang@DeclareLang{austrian}{german}{}
3670 \HyLang@DeclareLang{ngerman}{german}{}
3671 \HyLang@DeclareLang{naustrian}{german}{}
3672 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3673 \HyLang@DeclareLang{brazil}{portuges}{}
3674 \HyLang@DeclareLang{brazilian}{portuges}{}
3675 \HyLang@DeclareLang{portuguese}{portuges}{}
3676 \HyLang@DeclareLang{spanish}{spanish}{}
3677 \HyLang@DeclareLang{catalan}{catalan}{}
3678 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3679 \HyLang@DeclareLang{french}{french}{}
3680 \HyLang@DeclareLang{frenchb}{french}{}
3681 \HyLang@DeclareLang{français}{french}{}
3682 \HyLang@DeclareLang{acadian}{french}{}
3683 \HyLang@DeclareLang{canadien}{french}{}
3684 \HyLang@DeclareLang{italian}{italian}{}
3685 \HyLang@DeclareLang{magyar}{magyar}{}
3686 \HyLang@DeclareLang{hungarian}{magyar}{}
3687 \HyLang@DeclareLang{greek}{greek}{}
3688 \HyLang@DeclareLang{dutch}{dutch}{}

```

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

```

3689 \DeclareVoidOption{vietnamese}{%
3690   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3691   \Hy@AtEndOfPackage{%
3692     \@ifundefined{T@PU}{-}{%
3693       \input{puvnenc.def}%
3694     }%
3695   }%
3696 }
3697 \DeclareVoidOption{vietnam}{%
3698   \HyLang@addto\extravietnam\HyLang@vietnamese
3699   \Hy@AtEndOfPackage{%
3700     \@ifundefined{T@PU}{-}{%
3701       \input{puvnenc.def}%
3702     }%
3703   }%
3704 }

```

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

```

3705 \DeclareVoidOption{arabic}{%
3706   \Hy@AtEndOfPackage{%
3707     \@ifundefined{T@PU}{-}{%
3708       \input{puarenc.def}%
3709     }%
3710   }%
3711 }

```

13 Options to change appearance of links

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

```

3712 \define@key{Hyp}{colorlinks}[true]{%
3713   \Hy@boolkey{colorlinks}{#1}%
3714 }
3715 \DeclareVoidOption{hidelinks}{%
3716   \Hy@colorlinksfalse
3717   \Hy@ocgcolorlinksfalse
3718   \Hy@frenchlinksfalse
3719   \def\Hy@colorlink##1{\begingroup}%
3720   \def\Hy@endcolorlink{\endgroup}%
3721   \def\@pdfborder{0 0 0}%
3722   \let\@pdfborderstyle\ltx@empty
3723 }
3724 \define@key{Hyp}{ocgcolorlinks}[true]{%
3725   \Hy@boolkey{ocgcolorlinks}{#1}%
3726 }
3727 \Hy@AtBeginDocument{%
3728   \begingroup
3729   \@ifundefined{OBJ@OCG@view}{%
3730     \ifHy@ocgcolorlinks
3731       \Hy@Warning{%
3732         Driver does not support `ocgcolorlinks',\MessageBreak
3733         using `colorlinks' instead%
3734       }%
3735     \fi
3736   }{}%
3737   \endgroup

```

```

3738 }
3739 \define@key{Hyp}{frenchlinks}[true]{%
3740   \Hy@boolkey{frenchlinks}{#1}%
3741 }

```

14 Bookmarking

```

3742 \begingroup\expandafter\expandafter\expandafter\endgroup
3743 \expandafter\ifx\csname chapter\endcsname\relax
3744   \def\toclevel@part{0}%
3745 \else
3746   \def\toclevel@part{-1}%
3747 \fi
3748 \def\toclevel@chapter{0}
3749 \def\toclevel@section{1}
3750 \def\toclevel@subsection{2}
3751 \def\toclevel@subsubsection{3}
3752 \def\toclevel@paragraph{4}
3753 \def\toclevel@subparagraph{5}
3754 \def\toclevel@figure{0}
3755 \def\toclevel@table{0}
3756 \@ifpackageloaded{listings}{%
3757   \providecommand*\theHlstlisting{\thelstlisting}%
3758   \providecommand*\toclevel@lstlisting{0}%
3759 }{}
3760 \@ifpackageloaded{listing}{%
3761   \providecommand*\theHlisting{\thelisting}%
3762   \providecommand*\toclevel@listing{0}%
3763 }{}

3764 \define@key{Hyp}{bookmarks}[true]{%
3765   \Hy@boolkey{bookmarks}{#1}%
3766 }

3767 \define@key{Hyp}{bookmarksopen}[true]{%
3768   \Hy@boolkey{bookmarksopen}{#1}%
3769 }

```

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.

```

3770 \let\Hy@bookmarksdepth\c@tocdepth
3771 \define@key{Hyp}{bookmarksdepth}[]{}%
3772 \begingroup
3773   \edef\x{#1}%
3774   \ifx\x\empty
3775     \global\let\Hy@bookmarksdepth\c@tocdepth
3776   \else
3777     \@ifundefined{toclevel@\x}{%
3778       \@onelevel@sanitize\x
3779       \edef\y{\expandafter\@car\x\@nil}%

```



```

3780 \ifcase 0\expandafter\ifx\y-1\fi
3781 \expandafter\ifnum\expandafter`\y>47 %
3782 \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3783 \Hy@Warning{Unknown document division name (\x)}%
3784 \else
3785 \setbox\z@=\hbox{%
3786 \count@=\x
3787 \xdef\Hy@bookmarksdepth{\the\count@}%
3788 }%
3789 \fi
3790 }{%
3791 \setbox\z@=\hbox{%
3792 \count@=\csname toplevel@\x\endcsname
3793 \xdef\Hy@bookmarksdepth{\the\count@}%
3794 }%
3795 }%
3796 \fi
3797 \endgroup
3798 }

```

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

```

3799 \define@key{Hyp}{bookmarksopenlevel}{%
3800 \def\@bookmarksopenlevel{#1}%
3801 }
3802 \def\@bookmarksopenlevel{\maxdimen}
3803 % `bookmarkstype' to specify which `toc' file to mimic
3804 \define@key{Hyp}{bookmarkstype}{%
3805 \def\Hy@bookmarkstype{#1}%
3806 }
3807 \def\Hy@bookmarkstype{toc}

```

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

```

3808 \define@key{Hyp}{bookmarksnumbered}[true]{%
3809 \Hy@boolkey{bookmarksnumbered}{#1}%
3810 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3811 \define@key{Hyp}{CJKbookmarks}[true]{%
3812 \Hy@boolkey{CJKbookmarks}{#1}%
3813 }

3814 \def\Hy@temp#1{%
3815 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3816 }
3817 \def\Hy@@temp#1#2#3{%
3818 \define@key{Hyp}{#2color}{%
3819 \HyColor@HyperrefColor{##1}#1%
3820 }%
3821 \def#1{#3}%
3822 }
3823 \Hy@temp{link}{red}
3824 \Hy@temp{anchor}{black}
3825 \Hy@temp{cite}{green}
3826 \Hy@temp{file}{cyan}
3827 \Hy@temp{url}{magenta}
3828 \Hy@temp{menu}{red}
3829 \Hy@temp{run}{\@filecolor}
3830 \define@key{Hyp}{pagecolor}{%

```

```

3831 \Hy@WarningPageColor
3832 }
3833 \def\Hy@WarningPageColor{%
3834 \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3835 \global\let\Hy@WarningPageColor\relax
3836 }
3837 \define@key{Hyp}{allcolors}{%
3838 \HyColor@HyperrefColor{#1}\@linkcolor
3839 \HyColor@HyperrefColor{#1}\@anchorcolor
3840 \HyColor@HyperrefColor{#1}\@citecolor
3841 \HyColor@HyperrefColor{#1}\@filecolor
3842 \HyColor@HyperrefColor{#1}\@urlcolor
3843 \HyColor@HyperrefColor{#1}\@menucolor
3844 \HyColor@HyperrefColor{#1}\@runcolor
3845 }

3846 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3847 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3848 \let\@baseurl\@empty
3849 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3850 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3851 \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.

```

3852 \let\@pdfpagetransition\relax
3853 \define@key{Hyp}{pdfpagetransition}{%
3854 \def\@pdfpagetransition{#1}%
3855 }

```

`\@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.

```

3856 \let\@pdfpageduration\relax
3857 \define@key{Hyp}{pdfpageduration}{%
3858 \def\@pdfpageduration{#1}%
3859 \Hy@Match\@pdfpageduration{}{%
3860 ~(|[0-9]+\.[0-9]*|[0-9]*\.[0-9]+)%$%
3861 }{}{%
3862 \Hy@Warning{%
3863 Invalid value `\'@pdfpageduration'\MessageBreak
3864 of option `pdfpageduration'\MessageBreak
3865 is replaced by an empty value%
3866 }%
3867 \let\@pdfpageduration\ltx@empty
3868 }%
3869 }

```

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.

```

3870 \newif\ifHy@useHidKey
3871 \Hy@useHidKeyfalse

```

```

3872 \define@key{Hyp}{pdfpagehidden}[true]{%
3873   \Hy@boolkey{pdfpagehidden}{#1}%
3874   \ifHy@pdfpagehidden
3875     \global\Hy@useHidKeytrue
3876   \fi
3877 }

```

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).

```

3878 \def\Hy@ColorList{cite,file,link,menu,run,url}
3879 \@for\Hy@temp:=\Hy@ColorList\do{%
3880   \edef\Hy@temp{%
3881     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3882       \noexpand\HyColor@HyperrefBorderColor
3883       {##1}%
3884       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3885       {hyperref}%
3886       {\Hy@temp bordercolor}%
3887     }%
3888   }%
3889   \Hy@temp
3890 }
3891 \define@key{Hyp}{pagebordercolor}{%
3892   \Hy@WarningPageBorderColor
3893 }
3894 \def\Hy@WarningPageBorderColor{%
3895   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3896   \global\let\Hy@WarningPageBorderColor\relax
3897 }
3898 \define@key{Hyp}{allbordercolors}{%
3899   \def\Hy@temp##1##2{%
3900     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3901   }%
3902   \Hy@temp\@citebordercolor{cite}%
3903   \Hy@temp\@filebordercolor{file}%
3904   \Hy@temp\@linkbordercolor{link}%
3905   \Hy@temp\@menubordercolor{menu}%
3906   \Hy@temp\@runbordercolor{run}%
3907   \Hy@temp\@urlbordercolor{url}%
3908 }
3909 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3910 \Hy@DefNameKey{pdfhighlight}{%
3911   \do{/I}{Invert}%
3912   \do{/N}{None}%
3913   \do{/O}{Outline}%
3914   \do{/P}{Push}%
3915 }
3916 \def\Hy@setpdfhighlight{%
3917   \ifx\@pdfhighlight\@empty
3918     \else
3919       /H\@pdfhighlight

```

```

3920 \fi
3921 }
3922 \define@key{Hyp}{pdfborder}{%
3923 \let\Hy@temp\@pdfborder
3924 \def\@pdfborder{#1}%
3925 \Hy@Match\@pdfborder{}{%
3926 ~\HyPat@NonNegativeReal/ %
3927 \HyPat@NonNegativeReal/ %
3928 \HyPat@NonNegativeReal/%
3929 ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?${}%
3930 }{}{%
3931 \Hy@Warning{%
3932 Invalid value ~\@pdfborder'\MessageBreak
3933 for option `pdfborder'.\MessageBreak
3934 Option setting is ignored%
3935 }%
3936 \let\@pdfborder\Hy@temp
3937 }%
3938 }
3939 \define@key{Hyp}{pdfborderstyle}{%
3940 \let\Hy@temp\@pdfborderstyle
3941 \def\@pdfborderstyle{#1}%
3942 \Hy@Match\@pdfborderstyle{}{%
3943 ~%
3944 ( */Type */Border%
3945 | */W +\HyPat@NonNegativeReal/%
3946 | */S */[SDBIU]%
3947 | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))?)?}%
3948 )* *$%
3949 }{}{%
3950 \Hy@Warning{%
3951 Invalid value ~\@pdfborderstyle'\MessageBreak
3952 for option `pdfborderstyle'.\MessageBreak
3953 Option setting is ignored%
3954 }%
3955 \let\@pdfborderstyle\Hy@temp
3956 }%
3957 }
3958 \def\Hy@setpdfborder{%
3959 \ifx\@pdfborder\@empty
3960 \else
3961 /Border[\@pdfborder]%
3962 \fi
3963 \ifx\@pdfborderstyle\@empty
3964 \else
3965 /BS<<\@pdfborderstyle>>%
3966 \fi
3967 }
3968 \Hy@DefNameKey{pdfpagemode}{%
3969 \do{UseNone}{}%
3970 \do{UseOutlines}{}%
3971 \do{UseThumbs}{}%
3972 \do{FullScreen}{}%
3973 \do{UseOC}{PDF 1.5}%
3974 \do{UseAttachments}{PDF 1.6}%
3975 }
3976 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%

```

```

3977 \do{UseNone}{}%
3978 \do{UseOutlines}{}%
3979 \do{UseThumbs}{}%
3980 \do{FullScreen}{}%
3981 \do{UseOC}{PDF 1.5}%
3982 \do{UseAttachments}{PDF 1.6}%
3983 }
3984 \Hy@DefNameKey{pdfdirection}{%
3985 \do{L2R}{Left to right}%
3986 \do{R2L}{Right to left}%
3987 }
3988 \Hy@DefNameKey{pdfviewarea}{%
3989 \do{MediaBox}{}%
3990 \do{CropBox}{}%
3991 \do{BleedBox}{}%
3992 \do{TrimBox}{}%
3993 \do{ArtBox}{}%
3994 }
3995 \Hy@DefNameKey{pdfviewclip}{%
3996 \do{MediaBox}{}%
3997 \do{CropBox}{}%
3998 \do{BleedBox}{}%
3999 \do{TrimBox}{}%
4000 \do{ArtBox}{}%
4001 }
4002 \Hy@DefNameKey{pdfprintarea}{%
4003 \do{MediaBox}{}%
4004 \do{CropBox}{}%
4005 \do{BleedBox}{}%
4006 \do{TrimBox}{}%
4007 \do{ArtBox}{}%
4008 }
4009 \Hy@DefNameKey{pdfprintclip}{%
4010 \do{MediaBox}{}%
4011 \do{CropBox}{}%
4012 \do{BleedBox}{}%
4013 \do{TrimBox}{}%
4014 \do{ArtBox}{}%
4015 }
4016 \Hy@DefNameKey{pdfprintscaling}{%
4017 \do{AppDefault}{}%
4018 \do{None}{}%
4019 }
4020 \Hy@DefNameKey{pdfduplex}{%
4021 \do{Simplex}{}%
4022 \do{DuplexFlipShortEdge}{}%
4023 \do{DuplexFlipLongEdge}{}%
4024 }
4025 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
4026 \do{true}{}%
4027 \do{false}{}%
4028 }
4029 \define@key{Hyp}{pdfprintpagerange}{%
4030 \def\@pdfprintpagerange{#1}%
4031 }
4032 \Hy@DefNameKey{pdfnumcopies}{%
4033 \do{2}{two copies}%

```

```

4034 \do{3}{three copies}%
4035 \do{4}{four copies}%
4036 \do{5}{five copies}%
4037 }

4038 \define@key{Hyp}{pdfusetitle}[true]{%
4039 \Hy@boolkey{pdfusetitle}{#1}%
4040 }
4041 \def\HyXeTeX@CheckUnicode{%
4042 \ifxetex
4043 \ifHy@unicode
4044 \else
4045 \Hy@WarningNoLine{%
4046 XeTeX driver only supports unicode.\MessageBreak
4047 Enabling option `unicode'%
4048 }%
4049 \kvsetkeys{Hyp}{unicode}%
4050 \fi
4051 \else
4052 \let\HyXeTeX@CheckUnicode\relax
4053 \fi
4054 }
4055 \def\HyPsd@PrerenderUnicode#1{%
4056 \begingroup
4057 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
4058 \else
4059 \sbox0{%
4060 \let\GenericInfo\@gobbletwo
4061 \let\GenericWarning\@gobbletwo
4062 \let\GenericError\@gobblefour
4063 \PrerenderUnicode{#1}%
4064 }%
4065 \fi
4066 \endgroup
4067 }
4068 \define@key{Hyp}{pdftitle}{%
4069 \HyXeTeX@CheckUnicode
4070 \HyPsd@XeTeXBigCharstrue
4071 \HyPsd@PrerenderUnicode{#1}%
4072 \pdfstringdef\@pdftitle{#1}%
4073 }
4074 \define@key{Hyp}{pdfauthor}{%
4075 \HyXeTeX@CheckUnicode
4076 \HyPsd@XeTeXBigCharstrue
4077 \HyPsd@PrerenderUnicode{#1}%
4078 \pdfstringdef\@pdfauthor{#1}%
4079 }
4080 \define@key{Hyp}{pdfproducer}{%
4081 \HyXeTeX@CheckUnicode
4082 \HyPsd@XeTeXBigCharstrue
4083 \HyPsd@PrerenderUnicode{#1}%
4084 \pdfstringdef\@pdfproducer{#1}%
4085 }
4086 \define@key{Hyp}{pdfcreator}{%
4087 \HyXeTeX@CheckUnicode
4088 \HyPsd@XeTeXBigCharstrue
4089 \HyPsd@PrerenderUnicode{#1}%
4090 \pdfstringdef\@pdfcreator{#1}%

```

```

4091 }
4092 \define@key{Hyp}{addtopdfcreator}{%
4093 \HyXeTeX@CheckUnicode
4094 \HyPsd@XeTeXBigCharstrue
4095 \HyPsd@PrerenderUnicode{#1}%
4096 \pdfstringdef\@pdfcreator{\@pdfcreator, #1}%
4097 }
4098 \define@key{Hyp}{pdfcreationdate}{%
4099 \begingroup
4100 \Hy@unicodetrue
4101 \pdfstringdef\@pdfcreationdate{#1}%
4102 \endgroup
4103 }
4104 \define@key{Hyp}{pdfmoddate}{%
4105 \begingroup
4106 \Hy@unicodetrue
4107 \pdfstringdef\@pdfmoddate{#1}%
4108 \endgroup
4109 }
4110 \define@key{Hyp}{pdfsubject}{%
4111 \HyXeTeX@CheckUnicode
4112 \HyPsd@XeTeXBigCharstrue
4113 \HyPsd@PrerenderUnicode{#1}%
4114 \pdfstringdef\@pdfsubject{#1}%
4115 }
4116 \define@key{Hyp}{pdfkeywords}{%
4117 \HyXeTeX@CheckUnicode
4118 \HyPsd@XeTeXBigCharstrue
4119 \HyPsd@PrerenderUnicode{#1}%
4120 \pdfstringdef\@pdfkeywords{#1}%
4121 }
4122 \define@key{Hyp}{pdftrapped}{%
4123 \lowercase{\edef\Hy@temp{#1}}%
4124 \ifx\Hy@temp\HyInfo@trapped@true
4125 \def\@pdftrapped{True}%
4126 \else
4127 \ifx\Hy@temp\HyInfo@trapped@false
4128 \def\@pdftrapped{False}%
4129 \else
4130 \ifx\Hy@temp\HyInfo@trapped@unknown
4131 \def\@pdftrapped{Unknown}%
4132 \else
4133 \ifx\Hy@temp\@empty
4134 \else
4135 \Hy@Warning{%
4136   Unsupported value `#1'\MessageBreak
4137   for option `pdftrapped'%
4138 }%
4139 \fi
4140 \def\@pdftrapped{}%
4141 \fi
4142 \fi
4143 \fi
4144 }
4145 \def\HyInfo@trapped@true{true}
4146 \def\HyInfo@trapped@false{false}
4147 \def\HyInfo@trapped@unknown{unknown}

```

```

4148 \def\HyInfo@TrappedUnsupported{%
4149   \ifx\@pdftrapped\@empty
4150   \else
4151     \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
4152     \gdef\HyInfo@TrappedUnsupported{}%
4153   \fi
4154 }
4155 \define@key{Hyp}{pdfinfo}{%
4156   \kvsetkeys{pdfinfo}{#1}%
4157 }
4158 \def\Hy@temp#1{%
4159   \lowercase{\Hy@temp@A{#1}}{#1}%
4160 }
4161 \def\Hy@temp@A#1#2{%
4162   \define@key{pdfinfo}{#2}{%
4163     \hypersetup{pdf#1={##1}}%
4164   }%
4165 }
4166 \Hy@temp{Title}
4167 \Hy@temp{Author}
4168 \Hy@temp{Keywords}
4169 \Hy@temp{Subject}
4170 \Hy@temp{Creator}
4171 \Hy@temp{Producer}
4172 \Hy@temp{CreationDate}
4173 \Hy@temp{ModDate}
4174 \Hy@temp{Trapped}
4175 \newif\ifHyInfo@AddonUnsupported
4176 \kv@set@family@handler{pdfinfo}{%
4177   \HyInfo@AddonHandler{#1}{#2}%
4178 }
4179 \let\HyInfo@do\relax
4180 \def\HyInfo@AddonHandler#1#2{%
4181   \ifx\kv@value\relax
4182     \Hy@Warning{%
4183       Option 'pdfinfo': ignoring key '\kv@key' without value%
4184     }%
4185   \else
4186     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
4187     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4188     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4189       \ifHyInfo@AddonUnsupported
4190         \Hy@Warning{%
4191           This driver does not support additional\MessageBreak
4192           information entries, therefore\MessageBreak
4193           '\kv@key' is ignored%
4194         }%
4195       \else
4196         \def\HyInfo@tmp##1{%
4197           \kv@define@key{pdfinfo}{##1}{%
4198             \HyXeTeX@CheckUnicode
4199             \HyPsd@XeTeXBigCharstrue
4200             \HyPsd@PrerenderUnicode{####1}%
4201             \pdfstringdef\HyInfo@Value{####1}%
4202             \global\expandafter
4203             \let\csname HyInfo@Value@##1\endcsname
4204               \HyInfo@Value

```



```

4205     }%
4206 }%
4207 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4208 \global\expandafter
4209 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4210     \csname KV@pdfinfo@\HyInfo@Key\endcsname
4211 \xdef\HyInfo@AddonList{%
4212     \HyInfo@AddonList
4213     \HyInfo@do{\HyInfo@Key}%
4214 }%
4215 \kv@parse@normalized{%
4216     \HyInfo@Key={#2}%
4217 }{%
4218     \kv@processor@default{pdfinfo}%
4219 }%
4220 \fi
4221 \else
4222     \kv@parse@normalized{%
4223         \HyInfo@Key={#2}%
4224     }{%
4225         \kv@processor@default{pdfinfo}%
4226     }%
4227 \fi
4228 \fi
4229 }
4230 \def\HyInfo@GenerateAddons{%
4231     \ifHyInfo@AddonUnsupported
4232         \def\HyInfo@Addons{}%
4233     \else
4234         \begingroup
4235             \toks@{}%
4236             \def\HyInfo@do##1{%
4237                 \EdefEscapeName\HyInfo@Key{##1}%
4238                 \edef\x{%
4239                     \toks@{%
4240                         \the\toks@
4241                         /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4242                     }%
4243                 }%
4244                 \x
4245             }%
4246             \HyInfo@AddonList
4247             \edef\x{\endgroup
4248                 \def\noexpand\HyInfo@Addons{\the\toks@}%
4249             }%
4250             \x
4251         \fi
4252     }
4253 \global\let\HyInfo@AddonList\ltx@empty
4254 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
4255 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
4256 \let\setpdfinkmargin\@gobble
4257 \def\calculate@pdfview#1 #2\\{%
4258     \def\@pdfview{#1}%
4259     \ifx\@#2\\%
4260         \def\@pdfviewparams{-32768}%
4261     \else

```

```

4262 \def\@pdfviewparams{ #2}%
4263 \fi
4264 }
4265 \begingroup\expandafter\expandafter\expandafter\endgroup
4266 \expandafter\ifx\csname numexpr\endcsname\relax
4267 \def\Hy@number#1{%
4268 \expandafter\@firstofone\expandafter{\number#1}%
4269 }%
4270 \else
4271 \def\Hy@number#1{%
4272 \the\numexpr#1\relax
4273 }%
4274 \fi
4275 \define@key{Hyp}{pdfstartpage}{%
4276 \ifx\#1\%
4277 \let\@pdfstartpage\ltx@empty
4278 \else
4279 \edef\@pdfstartpage{\Hy@number{#1}}%
4280 \fi
4281 }%
4282 \define@key{Hyp}{pdfstartview}{%
4283 \ifx\#1\%
4284 \let\@pdfstartview\ltx@empty
4285 \else
4286 \hypercalcbpdef\@pdfstartview{/#1}%
4287 \fi
4288 }
4289 \def\HyPat@NonNegativeReal/{%
4290 \ *([0-9]+\.[0-9]*| [0-9]*\.[0-9]+) *%
4291 }
4292 \define@key{Hyp}{pdfremotestartview}{%
4293 \ifx\#1\%
4294 \def\@pdfremotestartview{/Fit}%
4295 \else
4296 \hypercalcbpdef\@pdfremotestartview{#1}%
4297 \edef\@pdfremotestartview{\@pdfremotestartview}%
4298 \Hy@Match\@pdfremotestartview{}{%
4299 ~ (XYZ(%
4300 ()| %
4301 (null|-?\HyPat@NonNegativeReal/) %
4302 (null|-?\HyPat@NonNegativeReal/) %
4303 (null|\HyPat@NonNegativeReal/)%
4304 )| % end of "XYZ"
4305 Fit(%
4306 ()| %
4307 B| %
4308 (H|V|BH|BV)(%
4309 ()| %
4310 (null|\HyPat@NonNegativeReal/)%
4311 )| %
4312 R %
4313 \HyPat@NonNegativeReal/ %
4314 \HyPat@NonNegativeReal/ %
4315 \HyPat@NonNegativeReal/ %
4316 \HyPat@NonNegativeReal/%
4317 ) % end of "Fit"
4318 )$%

```

```

4319 }{}{%
4320   \Hy@Warning{%
4321     Invalid value ` \@pdfremotestartview'\MessageBreak
4322     of `pdfremotestartview'\MessageBreak
4323     is replaced by `Fit'%
4324   }%
4325   \let\@pdfremotestartview\@empty
4326 }%
4327 \ifx\@pdfremotestartview\@empty
4328   \def\@pdfremotestartview{/Fit}%
4329 \else
4330   \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4331 \fi
4332 \fi
4333 }
4334 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4335 \define@key{Hyp}{pdftoolbar}[true]{%
4336   \Hy@boolkey{pdftoolbar}{#1}%
4337 }
4338 \define@key{Hyp}{pdfmenubar}[true]{%
4339   \Hy@boolkey{pdfmenubar}{#1}%
4340 }
4341 \define@key{Hyp}{pdfwindowui}[true]{%
4342   \Hy@boolkey{pdfwindowui}{#1}%
4343 }
4344 \define@key{Hyp}{pdffitwindow}[true]{%
4345   \Hy@boolkey{pdffitwindow}{#1}%
4346 }
4347 \define@key{Hyp}{pdfcenterwindow}[true]{%
4348   \Hy@boolkey{pdfcenterwindow}{#1}%
4349 }
4350 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4351   \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4352 }
4353 \define@key{Hyp}{pdfa}[true]{%
4354   \Hy@boolkey{pdfa}{#1}%
4355 }
4356 \define@key{Hyp}{pdfnewwindow}[true]{%
4357   \def\Hy@temp{#1}%
4358   \ifx\Hy@temp\@empty
4359     \Hy@pdfnewwindowsetfalse
4360   \else
4361     \Hy@pdfnewwindowsettrue
4362     \Hy@boolkey{pdfnewwindow}{#1}%
4363   \fi
4364 }
4365 \def\Hy@SetNewWindow{%
4366   \ifHy@pdfnewwindowset
4367     /NewWindow %
4368   \ifHy@pdfnewwindow true\else false\fi
4369 }
4370 }
4371 \Hy@DefNameKey{pdfpagelayout}{%
4372   \do{SinglePage}{}%
4373   \do{OneColumn}{}%
4374   \do{TwoColumnLeft}{}%
4375   \do{TwoColumnRight}{}%

```

```

4376 \do{TwoPageLeft}{PDF 1.5}%
4377 \do{TwoPageRight}{PDF 1.5}%
4378 }
4379 \define@key{Hyp}{pdflang}{%
4380 \edef\@pdflang{#1}%
4381 \def\Hy@temp{\relax}%
4382 \ifx\@pdflang\Hy@temp
4383 \let\@pdflang\relax
4384 \fi
4385 \ifx\@pdflang\relax
4386 \else
4387 \ifx\@pdflang\ltx@empty
4388 \else

```

Test according to ABNF of RFC 3066.

```

4389 \Hy@Match\@pdflang{icase}{%
4390 ~%
4391 [a-z]{1,8}%
4392 (-[a-z0-9]{1,8})*%
4393 $%
4394 }{%

```

Test according to ABNF of RFC 5646.

```

4395 \Hy@Match\@pdflang{icase}{%
4396 ~%
4397 (%
4398 % langtag
4399 (% language
4400 [a-z]{2,3}%
4401 ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4402 |[a-z]{4}% reserved for future use
4403 |[a-z]{5,8}% registered language subtag
4404 )%
4405 (-[a-z]{4})?% script
4406 (-([a-z]{2}|[0-9]{3}))?% region
4407 (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4408 (-[0-9a-wyz](-[a-z0-9]{2,8})+)*% extension
4409 (-x(-[a-z0-9]{1,8})+)?% privateuse
4410 % privateuse
4411 |x(-[a-z0-9]{1,8})+%
4412 % grandfathered/irregular
4413 |en-GB-oed%
4414 |i-(ami|bnn|default|enochian|hak|klinton|lux|%
4415 mingo|navajo|pwn|tao|tay|tsu)%
4416 |sgn-(BE-FR|BE-NL|CH-DE)%
4417 % grandfathered/regular
4418 |art-lojban%
4419 |cel-gaulish%
4420 |no-(bok|nyn)%
4421 |zh-(guoyu|hakka|min|min-nan|xiang)%
4422 )%
4423 $%
4424 }{%

```

Test for unique extensions.

```

4425 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4426 \Hy@Match\@pdflang{icase}{~x-}{%
4427 % remove privateuse
4428 \edef\Hy@temp{-\@pdflang}%

```

```

4429 \Hy@Match\Hy@temp{icase}{%
4430 ~%
4431 (%
4432 (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4433 )%
4434 -x-%
4435 }{%
4436 \edef\Hy@temp{%
4437 \expandafter\strip@prefix\pdfastmatch1%
4438 }%
4439 }{}%
4440 \Hy@Match\Hy@temp{icase}{%
4441 (-[a-wyz0-9]-).*\ltx@backslashchar1%
4442 }{%
4443 \Hy@Warning{%
4444 Invalid language identifier `#1'\MessageBreak
4445 for option `pdflang', because it violates\MessageBreak
4446 well-formedness defined in RFC 4646\MessageBreak
4447 by duplicate singleton subtags%
4448 }%
4449 \let\@pdflang\relax
4450 }{}%
4451 }%
4452 }{}%

```

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

```

4453 \ifx\@pdflang\relax
4454 \else
4455 \Hy@Match\@pdflang{icase}{%
4456 ~%
4457 [a-zA-Z]{2}-%
4458 (%
4459 aa|AA|%
4460 [qQ][m-zA-Z]|%
4461 [xX][a-zA-Z]|%
4462 zz|ZZ%
4463 )%
4464 (-|$)%
4465 }{%
4466 \Hy@Warning{%
4467 Invalid language identifier `#1'\MessageBreak
4468 for option `pdflang' because of invalid country code%
4469 \MessageBreak
4470 in second subtag (RFC 3066)%
4471 }%
4472 \let\@pdflang\relax
4473 }{}%
4474 \fi
4475 }{%
4476 \Hy@Warning{%
4477 Invalid language identifier `#1'\MessageBreak
4478 for option `pdflang', because it violates\MessageBreak
4479 well-formedness defined in RFC 5646%
4480 }%
4481 \let\@pdflang\relax
4482 }%
4483 }{%
4484 \Hy@Warning{%

```

```

4485     Invalid language identifier `#1'\MessageBreak
4486     for option `pdflang' (RFC 3066)%
4487 }%
4488 \let\@pdflang\relax
4489 }%
4490 \fi
4491 \fi
4492 }
4493 \define@key{Hyp}{pdfpagelabels}[true]{%
4494   \Hy@boolkey{pdfpagelabels}{#1}%
4495 }
4496 \define@key{Hyp}{pdfescapeform}[true]{%
4497   \Hy@boolkey{pdfescapeform}{#1}%
4498 }

```

Default values:

```

4499 \def\@linkbordercolor{1 0 0}
4500 \def\@urlbordercolor{0 1 1}
4501 \def\@menubordercolor{1 0 0}
4502 \def\@filebordercolor{0 .5 .5}
4503 \def\@runbordercolor{0 .7 .7}
4504 \def\@citebordercolor{0 1 0}
4505 \def\@pdfhighlight{/I}
4506 \let\@pdftitle\ltx@empty
4507 \let\@pdfauthor\ltx@empty
4508 \let\@pdfproducer\relax
4509 \def\@pdfcreator{LaTeX with hyperref}
4510 \let\@pdfcreationdate\ltx@empty
4511 \let\@pdfmoddate\ltx@empty
4512 \let\@pdfsubject\ltx@empty
4513 \let\@pdfkeywords\ltx@empty
4514 \let\@pdftrapped\ltx@empty
4515 \let\@pdfpagescrop\ltx@empty
4516 \def\@pdfstartview{/Fit}
4517 \def\@pdfremotestartview{/Fit}
4518 \def\@pdfstartpage{1}
4519 \let\@pdfprintpagerange\ltx@empty
4520 \let\@pdflang\relax
4521 \let\PDF@SetupDoc\@empty
4522 \let\PDF@FinishDoc\@empty
4523 \let\phantomsection\@empty
4524 \let\special@paper\@empty
4525 \def\HyperDestNameFilter#1{#1}
4526 \Hy@AtBeginDocument{%
4527   \begingroup
4528     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4529     \dimen@=\x\relax
4530     \ifdim\dimen@>\z@
4531       \else
4532         \dimen@=11in\relax
4533         \Hy@WarningNoLine{%
4534           Height of page (\expandafter\string\x) %
4535           is invalid (\the\x),\MessageBreak
4536           using 11in%
4537         }%
4538       \fi
4539       \dimen@=0.99626401\dimen@
4540       \xdef\Hy@pageheight{\strip@pt\dimen@}%

```

```

4541 \endgroup
4542 }
4543 \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.

```

4544 \let\hyper@normalise\ExecuteOptions
4545 \let\ExecuteOptions\hypersetup
4546 \Hy@RestoreCatcodes
4547 \InputIfFileExists{hyperref.cfg}{-}{-}
4548 \Hy@SetCatcodes
4549 \let\ExecuteOptions\hyper@normalise
4550 \ifx\Hy@MaybeStopNow\relax
4551 \else
4552 \Hy@stoppedearlytrue
4553 \expandafter\Hy@MaybeStopNow
4554 \fi
4555 \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.

```

4556 \SetupKeyvalOptions{family=Hyp}
4557 \DeclareLocalOptions{%
4558   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4559 }

```

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

```

4560 \@ifpackagewith{hyperref}{tex4ht}{%
4561 }{%
4562   \@ifpackageloaded{tex4ht}{%
4563     \PassOptionsToPackage{tex4ht}{hyperref}%
4564   }{%
4565     \ltx@ifundefined{HCode}{%
4566     }{%
4567       \begingroup
4568       \def\Hy@pkg{tex4ht}%
4569       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4570         \def\Hy@param{#2#3}%
4571         \ifx\Hy@param\ltx@empty
4572           \expandafter\ltx@gobble
4573         \else
4574           \def\Hy@param{#3}%
4575           \ifx\Hy@param\Hy@pkg
4576             \PassOptionsToPackage{#2}{tex4ht}%
4577             \expandafter\expandafter\expandafter\@gobble
4578           \else
4579             \expandafter\expandafter\expandafter\ltx@firstofone
4580           \fi
4581         \fi
4582         {\Hy@temp@A#4\Hy@NIL}%
4583       }%
4584       \expandafter
4585       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4586     \endgroup
4587     \PassOptionsToPackage{tex4ht}{hyperref}%
4588   }%
4589 }%

```

```

4590 }
4591 \let\ReadBookmarks\relax
4592 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4593 \def\Hy@xspace@end{}
4594 \ltx@ifundefined{xspaceaddexceptions}{%
4595   \Hy@AtBeginDocument{%
4596     \ltx@ifundefined{xspaceaddexceptions}{%
4597       }{%
4598         \def\Hy@xspace@end{%
4599           \ltx@gobble{end for xspace}%
4600         }%
4601         \xspaceaddexceptions{%
4602           \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4603         }%
4604       }%
4605     }%
4606   }{%
4607     \def\Hy@xspace@end{%
4608       \ltx@gobble{end for xspace}%
4609     }%
4610     \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4611   }

```

15.2 Option draft

```

4612 \Hy@AtBeginDocument{%
4613   \ifHy@draft
4614     \let\hyper@@anchor\@gobble
4615     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4616     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4617     \def\hyper@anchorend{\Hy@xspace@end}%
4618     \let\hyper@linkstart\@gobbletwo
4619     \def\hyper@linkend{\Hy@xspace@end}%
4620     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4621     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4622     \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4623     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4624     \let\PDF@SetupDoc\@empty
4625     \let\PDF@FinishDoc\@empty
4626     \let\@fifthoffive\@secondoftwo
4627     \let\@secondoffive\@secondoftwo
4628     \let\ReadBookmarks\relax
4629     \let\WriteBookmarks\relax
4630     \Hy@WarningNoLine{Draft mode on}%
4631   \fi
4632   \Hy@DisableOption{draft}%
4633   \Hy@DisableOption{nolinks}%
4634   \Hy@DisableOption{final}%
4635 }

```

15.3 PDF/A

```

4636 \Hy@DisableOption{pdfa}

```



```

4637 \ifHy@pdfa
4638   \ifnum \Hy@pdfversion < 4
4639     \kvsetkeys{Hyp}{pdfversion=1.4}%
4640   \fi
4641   \Hy@DisableOption{pdfversion}%
4642   \def\Hy@Acrobatmenu#1#2{%
4643     \leavevmode
4644     \begingroup
4645       \edef\x{#1}%
4646       \@onelevel@sanitize\x
4647       \ifx\x\Hy@NextPage
4648         \let\y=Y%
4649       \else
4650         \ifx\x\Hy@PrevPage
4651           \let\y=Y%
4652         \else
4653           \ifx\x\Hy@FirstPage
4654             \let\y=Y%
4655           \else
4656             \ifx\x\Hy@LastPage
4657               \let\y=Y%
4658             \else
4659               \let\y=N%
4660             \fi
4661           \fi
4662         \fi
4663       \fi
4664     \expandafter\endgroup
4665     \ifx\y Y%
4666     \else
4667       \Hy@Error{%
4668         PDF/A: Named action `#1' is not permitted%
4669       }\@ehc
4670       {#2}%
4671     \expandafter\@gobble
4672   \fi
4673 }%
4674 \def\Hy@temp#1{%
4675   \expandafter\def\csname Hy@#1\endcsname{#1}%
4676   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4677 }%
4678 \Hy@temp{NextPage}%
4679 \Hy@temp{PrevPage}%
4680 \Hy@temp{FirstPage}%
4681 \Hy@temp{LastPage}%
4682 \else
4683 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4684 \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.

```

4685 \Hy@nextfalse
4686 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
4687 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
4688 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}

```

```

4689 \ifHy@next
4690 \let\texttilde\~%
4691 \fi

4692 \def\Hy@wrapper@babel#1#2{%
4693 \begingroup
4694 \Hy@safe@activetrue
4695 \set@display@protect
4696 \edef\x{#2}%
4697 \@onelevel@sanitize\x
4698 \toks@{#1}%
4699 \edef\x{\endgroup\the\toks@{\x}}%
4700 \x
4701 }

4702 \def\Hy@WrapperDef#1{%
4703 \begingroup
4704 \escapechar=\m@ne
4705 \xdef\Hy@gtemp{%
4706 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4707 }%
4708 \endgroup
4709 \edef#1{%
4710 \noexpand\Hy@wrapper@babel
4711 \expandafter\noexpand\Hy@gtemp
4712 }%
4713 \expandafter\def\Hy@gtemp
4714 }

4715 \ifHy@hyperfigures
4716 \Hy@Info{Hyper figures ON}%
4717 \else
4718 \Hy@Info{Hyper figures OFF}%
4719 \fi
4720 \ifHy@nesting
4721 \Hy@Info{Link nesting ON}%
4722 \else
4723 \Hy@Info{Link nesting OFF}%
4724 \fi
4725 \ifHy@hyperindex
4726 \Hy@Info{Hyper index ON}%
4727 \else
4728 \Hy@Info{Hyper index OFF}%
4729 \fi
4730 \ifHy@plainpages
4731 \Hy@Info{Plain pages ON}%
4732 \else
4733 \Hy@Info{Plain pages OFF}%
4734 \fi
4735 \ifHy@backref
4736 \Hy@Info{Backreferencing ON}%
4737 \else
4738 \Hy@Info{Backreferencing OFF}%
4739 \fi
4740 \ifHy@typexml
4741 \Hy@AtEndOfPackage{%
4742 \RequirePackage{color}%
4743 \RequirePackage{nameref}[2012/07/28]%
4744 }%
4745 \fi

```

```

4746 \Hy@DisableOption{typexml}
4747 \ifHy@implicit
4748   \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4749 \else
4750   \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4751   \def\MaybeStopEarly{%
4752     \Hy@Message{Stopped early}%
4753     \Hy@AtBeginDocument{%
4754       \PDF@FinishDoc
4755       \gdef\PDF@FinishDoc{}%
4756     }%
4757   \endinput
4758 }%
4759 \Hy@AtBeginDocument{%
4760   \let\autoref\ref
4761   \let\autopageref\pageref
4762   \ifx\@pdfpagemode\@empty
4763     \gdef\@pdfpagemode{UseNone}%
4764   \fi
4765   \global\Hy@backreffalse
4766 }%
4767 \Hy@AtEndOfPackage{%
4768   \global\let\ReadBookmarks\relax
4769   \global\let\WriteBookmarks\relax
4770 }%
4771 \fi
4772 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4773 \Hy@AtEndOfPackage{%
4774   \@ifpackageloaded{tex4ht}{%
4775     \def\Hy@driver{htex4ht}%
4776     \Hy@texhttrue
4777   }{}%

```

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.

```

4778   \ifx\Hy@driver\@empty
4779   \else
4780     \ifx\pdfextension\@undefined
4781       \def\Hy@temp{hpdfTeX}%
4782     \else
4783       \def\Hy@temp{hluatex}%
4784     \fi
4785   \ifpdf
4786     \ifx\Hy@driver\Hy@temp
4787     \else
4788       \Hy@WarningNoLine{%
4789         Wrong driver `\'Hy@driver.def';\MessageBreak
4790         pdfTeX is running in PDF mode.\MessageBreak
4791         Forcing driver `\'Hy@temp.def'%
4792       }%
4793     \let\Hy@driver\Hy@temp
4794   \fi
4795 \else
4796   \ifx\Hy@driver\Hy@temp
4797     \Hy@WarningNoLine{%

```

```

4798      Wrong driver ``\Hy@driver.def';\MessageBreak
4799      pdfTeX is not running in PDF mode.\MessageBreak
4800      Using default driver%
4801  }%
4802  \let\Hy@driver\@empty
4803 \fi
4804 \fi
4805 \fi
4806 \ifHy@texht
4807 \else
4808   \ifx\Hy@driver\@empty
4809   \else
4810     \def\Hy@temp{hxtex}%
4811     \ifxetex
4812       \ifx\Hy@driver\Hy@temp
4813       \else
4814         \Hy@WarningNoLine{%
4815           Wrong driver ``\Hy@driver.def';\MessageBreak
4816           XeTeX is running.\MessageBreak
4817           Forcing driver ``\Hy@temp.def' for XeTeX%
4818         }%
4819         \let\Hy@driver\Hy@temp
4820       \fi
4821     \fi
4822   \fi
4823 \fi
4824 \ifx\Hy@driver\@empty
4825 \else
4826   \def\Hy@temp{hvtexhtm}%
4827   \ifvtexhtml
4828     \ifx\Hy@driver\Hy@temp
4829     \else
4830       \Hy@WarningNoLine{%
4831         Wrong driver ``\Hy@driver.def';\MessageBreak
4832         VTeX is running in HTML mode.\MessageBreak
4833         Forcing driver ``\Hy@temp.def'%
4834       }%
4835       \let\Hy@driver\Hy@temp
4836     \fi
4837   \else
4838     \ifx\Hy@driver\Hy@temp
4839     \Hy@WarningNoLine{%
4840       Wrong driver ``\Hy@driver.def';\MessageBreak
4841       VTeX is not running in HTML mode.\MessageBreak
4842       Using default driver%
4843     }%
4844     \let\Hy@driver\@empty
4845   \fi
4846 \fi
4847 \fi

```

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

```

4848 \let\HyOpt@DriverType\ltx@empty
4849 \ifx\HyOpt@CustomDriver\ltx@empty
4850   \ifx\Hy@driver\@empty
4851     \def\HyOpt@DriverType{ (autodetected)}%
4852     \providecommand*{\Hy@defaultdriver}{hypertex}%
4853   \ifpdf

```

```

4854 \ifx\pdfextension\@undefined
4855 \def\Hy@driver{hpdfTEX}%
4856 \else
4857 \def\Hy@driver{hLUAteX}%
4858 \fi
4859 \else
4860 \ifxetex
4861 \def\Hy@driver{hXeTeX}%
4862 \else
4863 \ifvtexhtml
4864 \def\Hy@driver{hVTeXhtm}%
4865 \def\MaybeStopEarly{%
4866 \Hy@Message{Stopped early}%
4867 \Hy@AtBeginDocument{%
4868 \PDF@FinishDoc
4869 \gdef\PDF@FinishDoc{}}%
4870 }%
4871 \endinput
4872 }%
4873 \else
4874 \ifvtexpdf
4875 \def\Hy@driver{hVTeX}%
4876 \else
4877 \ifvtexps
4878 \def\Hy@driver{hVTeX}%
4879 \else
4880 \ifx\HyOpt@DriverFallback\ltX@empty
4881 \let\Hy@driver\Hy@defaultdriver
4882 \def\HyOpt@DriverType{ (default)}%
4883 \else
4884 \begingroup
4885 \toks@{\expandafter{\HyOpt@DriverFallback}%
4886 \edef\x{\endgroup
4887 \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4888 }%
4889 \x
4890 \ifx\Hy@driver\ltX@empty
4891 \let\Hy@driver\Hy@defaultdriver
4892 \def\HyOpt@DriverType{ (default)}%
4893 \else
4894 \def\HyOpt@DriverType{ (fallback)}%
4895 \fi
4896 \fi
4897 \fi
4898 \fi
4899 \fi
4900 \fi
4901 \fi
4902 \ifx\Hy@driver\Hy@defaultdriver
4903 \def\Hy@temp{hdvwind}%
4904 \ifx\Hy@temp\Hy@driver
4905 \kvsetkeys{Hyp}{colorlinks}%
4906 \PassOptionsToPackage{dviwindo}{color}%
4907 \fi
4908 \fi
4909 \fi
4910 \else

```

```

4911 \def\HyOpt@DriverType{ (custom)}%
4912 \let\Hy@driver\HyOpt@CustomDriver
4913 \fi
4914 \Hy@InfoNoLine{Driver\HyOpt@DriverType: \Hy@driver}%
4915 \chardef\Hy@VersionChecked=0 %
4916 \input{\Hy@driver.def}%
4917 \ifcase\Hy@VersionChecked
4918 \Hy@VersionCheck{\Hy@driver.def}%
4919 \fi
4920 \let\@unprocessedoptions\relax
4921 \Hy@RestoreCatcodes
4922 \Hy@DisableOption{tex4ht}%
4923 \Hy@DisableOption{pdftex}%
4924 \Hy@DisableOption{nativepdf}%
4925 \Hy@DisableOption{dvi pdfm}%
4926 \Hy@DisableOption{dvi pdfmx}%
4927 \Hy@DisableOption{dvi pdfmx-outline-open}%
4928 \Hy@DisableOption{pdfmark}%
4929 \Hy@DisableOption{dvips}%
4930 \Hy@DisableOption{hypertex}%
4931 \Hy@DisableOption{vtex}%
4932 \Hy@DisableOption{vtexpdfmark}%
4933 \Hy@DisableOption{dviwindo}%
4934 \Hy@DisableOption{dvipsone}%
4935 \Hy@DisableOption{textures}%
4936 \Hy@DisableOption{latex2html}%
4937 \Hy@DisableOption{ps2pdf}%
4938 \Hy@DisableOption{xetex}%
4939 \Hy@DisableOption{driverfallback}%
4940 \Hy@DisableOption{customdriver}%
4941 \Hy@DisableOption{pdfversion}%
4942 }

```

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.

```

4943 \newif\ifHy@DvipdfmxOutlineOpen
4944 \ifxetex
4945 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4946 \else
4947 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4948 \Hy@DvipdfmxOutlineOpentru
4949 \fi
4950 \fi
4951 \begingroup\expandafter\expandafter\expandafter\endgroup
4952 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4953 \else
4954 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4955 \Hy@DvipdfmxOutlineOpentru
4956 \fi
4957 \fi

```

15.4.2 Bookmarks

```

4958 \def\WriteBookmarks{0}
4959 \def\@bookmarkopenstatus#1{%
4960 \ifHy@bookmarksopen

```

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

```

4961 \ifnum#1<\expandafter\@firstofone\expandafter
4962     {\number\@bookmarksopenlevel} % explicit space
4963 \else
4964     -%
4965 \fi
4966 \else
4967     -%
4968 \fi
4969 }
4970 \ifHy@bookmarks
4971 \Hy@Info{Bookmarks ON}%
4972 \ifx\@pdfpagemode\@empty
4973 \def\@pdfpagemode{UseOutlines}%
4974 \fi
4975 \else
4976 \let\@bookmarkopenstatus\ltx@gobble
4977 \Hy@Info{Bookmarks OFF}%
4978 \Hy@AtEndOfPackage{%
4979 \global\let\ReadBookmarks\relax
4980 \global\let\WriteBookmarks\relax
4981 }%
4982 \ifx\@pdfpagemode\@empty
4983 \def\@pdfpagemode{UseNone}%
4984 \fi
4985 \fi
4986 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
4987 \def\Hy@CatcodeWrapper#1{%
4988 \let\Hy@endWrap\ltx@empty
4989 \def\TMP@EnsureCode##1##2{%
4990 \edef\Hy@endWrap{%
4991 \Hy@endWrap
4992 \catcode##1 \the\catcode##1\relax
4993 }%
4994 \catcode##1 ##2\relax
4995 }%
4996 \TMP@EnsureCode{10}{12}% ^^J
4997 \TMP@EnsureCode{33}{12}% !
4998 \TMP@EnsureCode{34}{12}% "
4999 \TMP@EnsureCode{36}{3}% $ (math)
5000 \TMP@EnsureCode{38}{4}% & (alignment)
5001 \TMP@EnsureCode{39}{12}% '
5002 \TMP@EnsureCode{40}{12}% (
5003 \TMP@EnsureCode{41}{12}% )
5004 \TMP@EnsureCode{42}{12}% *
5005 \TMP@EnsureCode{43}{12}% +
5006 \TMP@EnsureCode{44}{12}% ,
5007 \TMP@EnsureCode{45}{12}% -
5008 \TMP@EnsureCode{46}{12}% .
5009 \TMP@EnsureCode{47}{12}% /
5010 \TMP@EnsureCode{58}{12}% :
5011 \TMP@EnsureCode{59}{12}% ;
5012 \TMP@EnsureCode{60}{12}% <
5013 \TMP@EnsureCode{61}{12}% =
5014 \TMP@EnsureCode{62}{12}% >
5015 \TMP@EnsureCode{63}{12}% ?
5016 \TMP@EnsureCode{91}{12}% [

```

```

5017 \TMP@EnsureCode{93}{12}% ]
5018 \TMP@EnsureCode{94}{7}% ^ (superscript)
5019 \TMP@EnsureCode{95}{8}% _ (subscript)
5020 \TMP@EnsureCode{96}{12}% `
5021 \TMP@EnsureCode{124}{12}% |
5022 \TMP@EnsureCode{126}{13}% ~ (active)
5023 #1\relax
5024 \Hy@EndWrap
5025 }

```

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

```

5026 \Hy@AtBeginDocument{%
5027   \ifHy@ocgcolorlinks
5028     \kvsetkeys{Hyp}{colorlinks}%
5029     \ifHy@pdfa
5030       \Hy@Warning{%
5031         PDF/A: Optional Content Groups are prohibited,\MessageBreak
5032         using `colorlinks' instead of `ocgcolorlinks'%
5033       }%
5034       \Hy@ocgcolorlinksfalse
5035     \fi
5036   \fi
5037   \ifHy@ocgcolorlinks
5038   \else
5039     \Hy@DisableOption{ocgcolorlinks}%
5040   \fi
5041   \ifHy@colorlinks
5042     \def\@pdfborder{0 0 0}%
5043     \let\@pdfborderstyle\@empty
5044     \ifHy@typexml
5045     \else
5046       \Hy@CatcodeWrapper{%
5047         \RequirePackage{color}%
5048       }%
5049     \fi
5050     \def\Hy@colorlink#1{%
5051       \begingroup
5052       \HyColor@UseColor#1%
5053     }%
5054     \def\Hy@endcolorlink{\endgroup}%
5055     \Hy@Info{Link coloring ON}%
5056   \else
5057     \ifHy@frenchlinks
5058       \def\Hy@colorlink#1{\begingroup\fontshape{\scdefault}\selectfont}%
5059       \def\Hy@endcolorlink{\endgroup}%
5060       \Hy@Info{French linking ON}%
5061     \else

```

for grouping consistency:

```

5062     \def\Hy@colorlink#1{\begingroup}%
5063     \def\Hy@endcolorlink{\endgroup}%
5064     \Hy@Info{Link coloring OFF}%
5065   \fi
5066 \fi
5067 \Hy@DisableOption{colorlinks}%
5068 \Hy@DisableOption{frenchlinks}%
5069 \ifHy@texht
5070   \long\def\@firstoffive#1#2#3#4#5{#1}%

```



```

5071 \long\def\@secondoffive#1#2#3#4#5{#2}%
5072 \long\def\@thirdoffive#1#2#3#4#5{#3}%
5073 \long\def\@fourthoffive#1#2#3#4#5{#4}%
5074 \long\def\@fifthoffive#1#2#3#4#5{#5}%
5075 \providecommand*\@safe@activetrue{}%
5076 \providecommand*\@safe@activesfalse{}%
5077 \def\T@ref#1{%
5078   \Hy@safe@activetrue
5079   \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5080   \Hy@safe@activesfalse
5081 }%
5082 \def\T@pageref#1{%
5083   \Hy@safe@activetrue
5084   \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5085   \Hy@safe@activesfalse
5086 }%
5087 \else
5088   \ifHy@typexml
5089   \else
5090     \Hy@CatcodeWrapper{%
5091       \RequirePackage{nameref}[2012/07/28]%
5092     }%
5093   \fi
5094 \fi
5095 \DeclareRobustCommand\ref{%
5096   \@ifstar\@crefstar\T@ref
5097 }%
5098 \DeclareRobustCommand\pageref{%
5099   \@ifstar\@pagerefstar\T@pageref
5100 }%
5101 % \@ifclassloaded{memoir}{%
5102 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
5103 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
5104 %   }%
5105 % } \ltx@secondoftwo
5106 % {%
5107 %   \DeclareRobustCommand*\@nameref{%
5108 %     \@ifstar\@mem@titlerefno link\@mem@titleref
5109 %   }%
5110 % }{%
5111   \DeclareRobustCommand*\@nameref{%
5112     \@ifstar\@namerefstar\T@nameref
5113   }%
5114 % }%
5115 }
5116 \Hy@AtBeginDocument{%
5117   \ifHy@texht
5118   \else
5119     \Hy@CatcodeWrapper\ReadBookmarks
5120   \fi
5121 }
5122 \ifHy@backref
5123   \RequirePackage{backref}%
5124 \else
5125   \let\Hy@backout\@gobble
5126 \fi
5127 \Hy@DisableOption{backref}

```

```
5128 \Hy@DisableOption{pagebackref}
```

```
5129 \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`.

```
5130 \begingroup
5131 \endlinechar=-1 %
5132 \catcode`\^^A=14 %
5133 \catcode`\^^M\active
5134 \catcode`\%\active
5135 \catcode`\#\active
5136 \catcode`\_\active
5137 \catcode`\$\active
5138 \catcode`\&\active
5139 \gdef\hyper@normalise{^^A
5140   \begingroup
5141   \catcode`\^^M\active
5142   \def^^M{ }^^A
5143   \catcode`\%\active
5144   \let%\@percentchar
5145   \let%\@percentchar
5146   \catcode`\#\active
5147   \def#{\hyper@hash}^^A
5148   \def#{\hyper@hash}^^A
5149   \@makeother\&^^A
5150   \edef&{\string&}^^A
5151   \edef\&{\string&}^^A
5152   \edef\textunderscore{\string_}^^A
5153   \let_\textunderscore
5154   \catcode`\_\active
5155   \let_\textunderscore
5156   \let~\hyper@tilde
5157   \let~\hyper@tilde
5158   \let\textasciitilde\hyper@tilde
5159   \let\\@backslashchar
5160   \edef${\string$}^^A
5161   \Hy@safe@activetrue
5162   \hyper@n@rmalise
5163 }^^A
5164 \catcode`\#=6 ^^A
5165 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5166 \gdef\hyper@n@rmalise#1#2{^^A
5167   \def\Hy@tempa{#2}^^A
5168   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5169     \ltx@ReturnAfterElseFi{^^A
5170       \hyper@@normalise{#1}^^A
5171     }^^A
5172   \else
5173     \ltx@ReturnAfterFi{^^A
```

```

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

5200 \def\hyperlink#1#2{%
5201   \hyper@@@link{}{#1}{#2}%
5202 }

5203 \def\Hy@VerboseLinkStart#1#2{%
5204   \ifHy@verbose
5205     \begingroup
5206     \Hy@safe@activestrue
5207     \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
5208     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
5209     \xdef\Hy@VerboseGlobalTemp{%
5210       \Hy@VerboseGlobalTemp, %
5211       line \the\inputlineno
5212     }%
5213   \endgroup
5214   \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5215   \@onelevel@sanitize\Hy@VerboseLinkInfo
5216   \fi
5217 }

5218 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5219 \def\Hy@VerboseLinkStop{%
5220   \ifHy@verbose
5221     \begingroup
5222     \edef\x{\endgroup
5223       \write\m@ne{%
5224         Package `hyperref' Info: %
5225         End of reference \Hy@VerboseLinkInfo.%
5226       }%
5227     }%
5228   \x
5229   \fi

```

```

5230 }

5231 \def\Hy@VerboseAnchor#1{%
5232   \ifHy@verbose
5233     \begingroup
5234       \Hy@safe@activetrue
5235       \Hy@Info{Anchor `\'HyperDestNameFilter{#1}'}%
5236     \endgroup
5237   \fi
5238 }

5239 \def\Hy@AllowHyphens{%
5240   \relax
5241   \ifhmode
5242     \penalty\@M
5243     \hskip\z@skip
5244   \fi
5245 }

5246 \DeclareRobustCommand*{\href}[1][]{%
5247   \begingroup
5248     \setkeys{href}{#1}%
5249     \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
5250 }
5251 \def\Hy@href#1{%
5252   \hyper@normalise\href@
5253 }
5254 \begingroup
5255   \catcode`\$=6 %
5256   \catcode`\#=12 %
5257   \gdef\href$1{\expandafter\href@split$1##\}%
5258   \gdef\href@split$1##$2##$3\\$4{%
5259     \hyper@@link{$1}{$2}{$3}{$4}%
5260   \endgroup
5261 }%
5262 \endgroup

Option 'page'.
5263 \define@key{href}{page}{%
5264   \def\Hy@href@page{#1}%
5265 }
5266 \let\Hy@href@page\@empty
5267 \newcount\c@Hy@tempcnt
5268 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5269 \def\Hy@MakeRemoteAction{%
5270   \ifx\Hy@href@page\@empty
5271     \def\Hy@href@page{0}%
5272   \else
5273     \setcounter{Hy@tempcnt}{\Hy@href@page}%
5274     \ifnum\c@Hy@tempcnt<\@ne
5275       \Hy@Warning{%
5276         Invalid page number (\theHy@tempcnt)\MessageBreak
5277         for remote PDF file.\MessageBreak
5278         Using page 1%
5279       }%
5280     \def\Hy@href@page{0}%
5281   \else
5282     \global\advance\c@Hy@tempcnt\m@ne
5283   \edef\Hy@href@page{\theHy@tempcnt}%
5284   \fi

```

5285 \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.

```
5286 \ifx\Hy@href@nextactionraw\@empty
5287 \else
5288 \Hy@pdfnewwindowsettrue
5289 \Hy@pdfnewwindowtrue
5290 \fi
5291 }
```

Option ‘pdfremotestartview’.

```
5292 \define@key{href}{pdfremotestartview}{%
5293 \setkeys{Hyp}{pdfremotestartview={#1}}}%
5294 }
```

Option ‘pdfnewwindow’.

```
5295 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5296 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default
```

Option ‘ismap’.

```
5297 \newif\ifHy@href@ismap
5298 \define@key{href}{ismap}[true]{%
5299 \ltx@ifundefined{Hy@href@ismap#1}{%
5300 \Hy@Error{%
5301 Invalid value (#1) for key `ismap'.\MessageBreak
5302 Permitted values are `true' or `false'.\MessageBreak
5303 Ignoring `ismap'%
5304 } \@ehc
5305 }{%
5306 \csname Hy@href@ismap#1\endcsname
5307 }%
5308 }
```

Option ‘nextactionraw’.

```
5309 \let\Hy@href@nextactionraw\@empty
5310 \define@key{href}{nextactionraw}{%
5311 \edef\Hy@href@nextactionraw{#1}%
5312 \ifx\Hy@href@nextactionraw\@empty
5313 \else
5314 \Hy@Match\Hy@href@nextactionraw{%
5315 ~(\HyPat@ObjRef/|<<.*[/|.+>>|
5316 \[( ?\HyPat@ObjRef/|<<.*[/|.+>>)+ ?])$%
5317 }{%
5318 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
5319 \Hy@href@nextactionraw\MessageBreak
5320 The action is discarded%
5321 }%
5322 }%
5323 \ifx\Hy@href@nextactionraw\@empty
5324 \else
5325 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5326 \fi
5327 \fi
5328 }
5329 \def\HyPat@ObjRef/{.+}
```

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

```
5330 \RequirePackage{url}
5331 \let\HyOrg@url\url
```

```

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

5337 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
5338 \providecommand\hyper@image[2]{#2}

5339 \def\hypertarget#1#2{%
5340   \ifHy@nesting
5341     \hyper@@anchor{#1}{#2}%
5342   \else
5343     \hyper@@anchor{#1}{\relax}#2%
5344   \fi
5345 }

```

`\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.

```

5346 \DeclareRobustCommand*\hyperref{%
5347   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5348 }
5349 \def\Hy@babelnormalise#1[#2]{%
5350   \begingroup
5351     \Hy@safe@activestrue
5352     \edef\Hy@tempa{%
5353       \endgroup
5354       \noexpand#1[#2]}%
5355   }%
5356   \Hy@tempa
5357 }
5358 \def\@hyperref{\hyper@normalise\@hyperref}
5359 \def\@hyperref#1#2#3{%
5360   \edef\ref@one{\ifx\\#2\\#2\else#2.\fi#3}%
5361   \expandafter\tryhyper@link\ref@one\{#1}%
5362 }
5363 \def\tryhyper@link#1\\#2{%
5364   \hyper@@link{#2}{#1}%
5365 }

5366 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
5367 \def\@hyperdef#1#2#3{%, category, name, text
5368   \ifx\\#1\\%
5369     \def\Hy@AnchorName{#2}%
5370   \else
5371     \def\Hy@AnchorName{#1.#2}%
5372   \fi
5373   \ifHy@nesting
5374     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5375   \else
5376     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5377   \fi
5378 }

```

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.

```

5379 \let\hyperrefundefinedlink\@firstofone
5380 \def\label@hyperref[#1]{%
5381   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5382 }%
5383 \def\label@@hyperref#1#2#3{%
5384   \ifx#1\relax
5385     \protect\G@refundefinedtrue
5386     \@latex@warning{%
5387       Hyper reference `#2' on page \thepage \space undefined%
5388     }%
5389     \begingroup
5390       \hyperrefundefinedlink{#3}%
5391     \endgroup
5392   \else
5393     \hyper@@link{\expandafter\@fifthoffive#1}%
5394     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5395   \fi
5396 }
5397 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5398                               % anchor text
5399   \@bsphack
5400   \ifx\\#2\\%
5401     \def\Hy@AnchorName{#3}%
5402   \else
5403     \def\Hy@AnchorName{#2.#3}%
5404   \fi
5405   \if@filesw
5406     \protected@write\@auxout{}{%
5407       \string\newlabel{#1}{\{\}\}\{\}\Hy@AnchorName\}\}%
5408   }%
5409   \fi
5410   \@esphack
5411   \ifHy@nesting
5412     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5413   \else
5414     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5415   \fi
5416 }

```

16.1 Link box support for XeTeX

```

5417 \newdimen\XeTeXLinkMargin
5418 \setlength{\XeTeXLinkMargin}{2pt}
5419 \ifxetex
5420   \font\XeTeXLink@font=pzdr at 1sp\relax
5421   \newcommand*\XeTeXLink@space{%
5422     \begingroup
5423       \XeTeXLink@font
5424       \@xxxii
5425     \endgroup
5426   }%
5427   \newcommand{\XeTeXLinkBox}[1]{%
5428     \begingroup
5429     \leavevmode

```

```

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

```

5467 \def\hyper@link{\let\Hy@reserved@a\relax
5468 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
5469 }
5470 % #1: type
5471 % #2: URL
5472 % #3: destination name
5473 % #4: text
5474 \def\hyper@link@[#1]#2#3#4{%
5475 \ltx@ifempty{#4}{% link text
5476 \Hy@Warning{Suppressing empty link}%
5477 }{%
5478 \begingroup
5479 \protected@edef\Hy@tempa{#2}%

```



```

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

```

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.

```

5508 \def\hyper@readexternallink#1\{#2#3#4{%
5509 \begingroup
5510 \let\\\relax
5511 \expandafter\endgroup
5512 \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
5513 }
5514 \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.

```

5515 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5516 }

```

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

```

5517 \def\@pdftempwordfile{file}%
5518 \def\@pdftempwordrun{run}%
5519 \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:

```

5520 \ifx\\#6\\%
5521 \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5522 \else
5523 \ifx\\#4\\%
5524 \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
5525 \else

```

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

```

5526 \def\@pdftempa{#4}%
5527 \ifx\@pdftempa\@pdftempwordfile
5528 \@hyper@linkfile#7\\{#3}{#2}{#7}%
5529 \else

```

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

```

5530 \ifx\@pdftempa\@pdftempwordrun
5531 \ifHy@pdfa
5532 \Hy@Error{%
5533 PDF/A: Launch action is prohibited%
5534 }\@ehc
5535 \begingroup
5536 \leavevmode
5537 #2%
5538 \endgroup
5539 \else
5540 \@hyper@launch#7\\{#3}{#2}%
5541 \fi
5542 \else

```

otherwise its a URL

```

5543 \hyper@linkurl{#3}{#7\ifx\\#2\\else\hyper@hash#2\fi}%
5544 \fi
5545 \fi
5546 \fi
5547 \fi
5548 }

```

By default, turn run: into file:

```

5549 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
5550 \hyper@linkurl{#2}{%
5551 \Hy@linkfileprefix
5552 #1%
5553 \ifx\\#3\\%
5554 \else
5555 \hyper@hash
5556 #3%
5557 \fi
5558 }%
5559 }

```

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

```

5560 \def\@hyper@linkfile file:#1\|#2#3#4{%
5561     %file url,link string, name, original uri
5562     \filename@parse{#1}%
5563     \ifx\filename@ext\relax
5564         \edef\filename@ext{\XR@ext}%
5565     \fi
5566     \def\use@file{\filename@area\filename@base.\filename@ext}%
5567     \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5568         \hyper@linkfile{#2}{\use@file}{#3}%
5569     }{%
5570         \ifx\@baseurl\@empty
5571             \hyper@linkurl{#2}{%
5572                 #4\ifx\|#3\|\\else\hyper@hash#3\fi
5573             }%
5574         \else
5575             \hyper@linkurl{#2}{\use@file\ifx\|#3\|\\else\hyper@hash#3\fi}%
5576         \fi
5577     }%
5578 }

5579 \def\Hy@IfStringEndsWith#1#2{%
5580     \begingroup
5581     \edef\x{#1}%
5582     \@onelevel@sanitize\x
5583     \edef\x{.\x}%
5584     \edef\y{#2}%
5585     \@onelevel@sanitize\y
5586     \edef\y{.\y}%
5587     \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5588         \endgroup
5589         \ifx\relax##2\relax
5590             \expandafter\ltx@secondoftwo
5591         \else
5592             \expandafter\ltx@firstoftwo
5593         \fi
5594     }%
5595     \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5596 }

5597 \def\Hy@StringLocalhost{localhost}
5598 \@onelevel@sanitize\Hy@StringLocalhost
5599 \def\Hy@CleanupFile#1{%
5600     \edef#1{#1}%
5601     \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5602 }
5603 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5604     \begingroup
5605     \toks@{\endgroup}%
5606     \def\x{#1}%
5607     \ifx\x\@empty
5608         \def\x{#2}%
5609     \ifx\x\@empty
5610         \toks@{\endgroup\def#5{/#3}}%
5611     \else
5612         \@onelevel@sanitize\x
5613         \ifx\x\Hy@StringLocalhost
5614             \toks@{\endgroup\def#5{/#3}}%
5615         \fi
5616     \fi

```

```

5617 \fi
5618 \the\toks@
5619 }

```

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.

```

5620 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5621 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5622   \ifx\#1\%
5623     #2\Hy@Warning{Ignoring empty anchor}%
5624   \else
5625     \def\anchor@spot{#2#3}%
5626     \let\put@me@back\@empty
5627     \ifx\relax#2\relax
5628     \else
5629       \ifHy@nesting
5630       \else
5631         \ifcat a\noexpand#2\relax
5632         \else
5633           \ifcat 0\noexpand#2 \relax
5634           \else
5635             \typeout{Anchor start is not alphanumeric %
5636             % on input line\the\inputlineno%
5637             }%
5638             \let\anchor@spot\@empty
5639             \def\put@me@back{#2#3}%
5640           \fi
5641         \fi
5642       \fi
5643     \fi
5644     \ifHy@activeanchor
5645     \anchor@spot
5646   \else
5647     \hyper@anchor{#1}%
5648   \fi
5649   \expandafter\put@me@back
5650 \fi
5651 \let\anchor@spot\@empty
5652 }
5653 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5654 \ifHy@destlabel

\hyper@newdestlabel

5655 \def\hyper@newdestlabel#1#2{%
5656   \begingroup
5657   \Hy@safe@activetrue
5658   \edef\x{endgroup
5659     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5660   }%

```

```

5661 \x
5662 }%

\hyper@destlabel@hook
5663 \providecommand*{\hyper@destlabel@hook}{}%

\Hy@DestRename
5664 \newcommand*{\Hy@DestRename}[2]{%
5665 \ltx@ifundefined{HyDL!#1}{%
5666 \begingroup
5667 \Hy@safe@activestruer
5668 \edef\dest@name{#1}%
5669 \edef\label@name{#2}%
5670 \hyper@destlabel@hook
5671 \Hy@IsNotEmpty{dest@name}{%
5672 \Hy@IsNotEmpty{label@name}{%
5673 \global\expandafter
5674 \let\csname HyDL!#1\endcsname\ltx@empty
5675 \if@files
5676 \protected@write\@auxout{}{%
5677 \string\hyper@newdestlabel
5678 {#1}%
5679 {\label@name}%
5680 }%
5681 \fi
5682 }%
5683 }%
5684 \endgroup
5685 }{}%
5686 }%

\HyperDestRename
5687 \newcommand*{\HyperDestRename}[2]{%
5688 \AtBeginDocument{%
5689 \Hy@DestRename{#1}{#2}%
5690 }%
5691 }%
5692 \AtBeginDocument{%
5693 \let\HyperDestRename\Hy@DestRename
5694 }%

\Hy@IsNotEmpty
5695 \def\Hy@IsNotEmpty#1{%
5696 \ltx@ifundefined{#1}\ltx@gobble{%
5697 \expandafter\ifx\csname#1\endcsname\ltx@empty
5698 \expandafter\ltx@gobble
5699 \else
5700 \expandafter\ltx@firstofone
5701 \fi
5702 }%
5703 }%

5704 \ltx@GlobalAppendToMacro\label@hook{%
5705 \HyperDestRename\@currentHref\label@name
5706 }%

\HyperDestLabelReplace

```

```

5707 \def\HyperDestLabelReplace#1{%
5708   \ltx@ifundefined{HyDL@#1}{%
5709     #1%
5710   }{%
5711     \csname HyDL@#1\endcsname
5712   }%
5713 }%

```

\HyperDestNameFilter

```

5714 \let\HyperDestNameFilter\HyperDestLabelReplace
5715 \else

```

\hyper@newdestlabel

```

5716 \let\hyper@newdestlabel\ltx@gobbletwo

```

\HyperDestLabelReplace

```

5717 \let\HyperDestLabelReplace\ltx@firstofone

```

\HyperDestRename

@gobbletwo

```

5718 \fi
5719 \Hy@DisableOption{destlabel}

```

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

```

5720 \AddLineBeginAux{%
5721   \string\providecommand\string\hyper@newdestlabel[2]{}%
5722 }

```

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.

```

5723 \let\htmladding\hyperimage
5724 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5725 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5726 \def\htmlref#1#2{% anchor text, label
5727   \label@hyperref[{#2}]{#1}%
5728 }

```

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.

```

5729 \def\@@latextohtmlX{%
5730   \let\hhyperref\hyperref
5731   \def\hyperref##1##2##3##4{% anchor text for HTML
5732     % text to print before label in print
5733     % label
5734     % post-label text in print

```

```

5735    ##2\ref{##4}##3%
5736  }%
5737 }

```

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.

```

5738 \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
5739 \def\HyField@NewFlag#1#2{%
5740   \lowercase{\HyField@NewOption{#2}}%
5741   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5742 }

```

```

\HyField@NewFlagOnly
5743 \def\HyField@NewFlagOnly#1#2{%
5744   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5745 }

```

```

\HyField@NewOption #1: option name
5746 \def\HyField@NewOption#1{%
5747   \expandafter\newif\csname ifFld@#1\endcsname
5748   \define@key{Field}{#1}[true]{%
5749     \lowercase{\Field@boolkey{##1}}{#1}%
5750   }%
5751 }

```

```

\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
5752 \def\HyField@NewBitsetFlag#1#2#3#4{%
5753   \begingroup
5754   \count@=#4\relax
5755   \advance\count@\m@ne
5756   \def\x##1{%
5757     \endgroup

```

```

5758 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5759 \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5760 \expandafter\edef\csname HyField@#3@#1\endcsname{%
5761 (\number#4) #2%
5762 }%
5763 \else
5764 \expandafter\edef\csname HyField@#3@#1\endcsname{%
5765 \csname HyField@#3@#1\endcsname
5766 /#2%
5767 }%
5768 \fi
5769 }%
5770 \expandafter\x\expandafter{\the\count@}%
5771 }

```

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

```

5772 \def\HyField@UseFlag#1#2{%
5773 \lowercase{\HyField@@UseFlag{#2}}{#1}%
5774 }

```

\HyField@@UseFlag

```

5775 \def\HyField@@UseFlag#1#2{%
5776 \bitsetSetValue{HyField@#2}{%
5777 \csname HyField@#2@#1\endcsname
5778 }{%
5779 \csname ifFld@#1\endcsname 1\else 0\fi
5780 }%
5781 }

```

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

```

5782 \def\HyField@SetFlag#1#2{%
5783 \lowercase{\HyField@@SetFlag{#2}}{#1}%
5784 }

```

\HyField@@SetFlag

```

5785 \def\HyField@@SetFlag#1#2{%
5786 \bitsetSetValue{HyField@#2}{%
5787 \csname HyField@#2@#1\endcsname
5788 }{1}%
5789 }

```

\HyField@PrintFlags

```

5790 \def\HyField@PrintFlags#1#2{%
5791 \ifHy@verbose
5792 \begingroup
5793 \let\Hy@temp\@empty
5794 \let\MessageBreak\relax
5795 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5796 \bitsetGetSetBitList{HyField@#1}\do{%
5797 \edef\Hy@temp{%
5798 \Hy@temp
5799 \csname HyField@#1@\x\endcsname\MessageBreak
5800 }%
5801 }%
5802 \edef\x{\endgroup
5803 \noexpand\Hy@Info{%
5804 Field flags: %

```



```

5805      \expandafter\ifx\@car#1\@nil S\else/\fi
5806      #1 %
5807      \bitsetGetDec{HyField@#1} %
5808      (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5809      \Hy@temp
5810      for #2%
5811      }%
5812      }\x
5813      \fi
5814      }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5815 \HyField@NewFlag{Ff}{ReadOnly}{1}
5816 \HyField@NewFlag{Ff}{Required}{2}
5817 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5818 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5819 \HyField@NewFlag{Ff}{Radio}{16}
5820 \HyField@NewFlag{Ff}{Pushbutton}{17}
5821 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5822 \HyField@NewFlag{Ff}{Multiline}{13}
5823 \HyField@NewFlag{Ff}{Password}{14}
5824 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5825 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5826 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5827 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5828 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5829 \HyField@NewFlag{Ff}{Combo}{18}
5830 \HyField@NewFlag{Ff}{Edit}{19}
5831 \HyField@NewFlag{Ff}{Sort}{20}
5832 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5833 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5834 \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.

```

5835 \newif\ifFld@popdown
5836 \define@key{Field}{popdown}[true]{%
5837   \lowercase{\Field@boolkey{#1}}{popdown}%
5838 }

```

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.

```

5839 \HyField@NewFlag{F}{Invisible}{1}
5840 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5841 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5842 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5843 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3

```

```

5844 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5845 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5846 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5847 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5848 \ifHy@pdfa
5849 \def\HyField@PDFAFlagWarning#1#2{%
5850   \Hy@Warning{%
5851     PDF/A: Annotation flag `#1' must\MessageBreak
5852     be set to `#2'%
5853   }%
5854 }%
5855 \Fld@invisiblefalse
5856 \def\Fld@invisibletrue{%
5857   \HyField@PDFAFlagWarning{invisible}{false}%
5858 }%
5859 \Fld@hiddenfalse
5860 \def\Fld@hiddenttrue{%
5861   \HyField@PDFAFlagWarning{hidden}{false}%
5862 }%
5863 \Fld@printtrue
5864 \def\Fld@printfalse{%
5865   \HyField@PDFAFlagWarning{print}{true}%
5866 }%
5867 \Fld@nozoomtrue
5868 \def\Fld@nozoomfalse{%
5869   \HyField@PDFAFlagWarning{nozoom}{true}%
5870 }%
5871 \Fld@norotatetrue
5872 \def\Fld@norotatefalse{%
5873   \HyField@PDFAFlagWarning{norotate}{true}%
5874 }%
5875 \Fld@noviewfalse
5876 \def\Fld@noviewtrue{%
5877   \HyField@PDFAFlagWarning{noview}{false}%
5878 }%
5879 \fi

```

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

```

5880 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5881 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5882 \HyField@NewFlag{Submit}{GetMethod}{4}
5883 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5884 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5885 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5886 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5887 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5888 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5889 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5890 \HyField@NewFlag{Submit}{ExclFKey}{12}
5891 \HyField@NewFlag{Submit}{EmbedForm}{14}

5892 \define@key{Field}{export}{%
5893   \lowercase{\def\Hy@temp{#1}}%
5894   \@ifundefined{Fld@export@\Hy@temp}{%
5895     \@onelevel@sanitize\Hy@temp
5896     \Hy@Error{%
5897       Unknown export format ` \Hy@temp'.\MessageBreak

```

```

5898     Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5899   }\@ehc
5900 }\{%
5901   \let\Fld@export\Hy@temp
5902 }\%
5903 }
5904 \def\Fld@export{fdf}
5905 \@namedef{Fld@export@fdf}{0}%
5906 \@namedef{Fld@export@html}{1}%
5907 \@namedef{Fld@export@xfdf}{2}%
5908 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5909 \def\HyField@FlagsSubmit{%
5910   \bitsetReset{HyField@Submit}%
5911   \ifcase\@nameuse{Fld@export@\Fld@export} %
5912     % FDF
5913     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5914     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5915     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5916     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5917     \HyField@UseFlag{Submit}{CanonicalFormat}%
5918     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5919     \HyField@UseFlag{Submit}{ExclFKey}%
5920     \HyField@UseFlag{Submit}{EmbedForm}%
5921   \or % HTML
5922     \HyField@SetFlag{Submit}{ExportFormat}%
5923     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5924     \HyField@UseFlag{Submit}{GetMethod}%
5925     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5926     \HyField@UseFlag{Submit}{CanonicalFormat}%
5927   \or % XFDF
5928     \HyField@SetFlag{Submit}{XFDF}%
5929     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5930     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5931     \HyField@UseFlag{Submit}{CanonicalFormat}%
5932   \or % PDF
5933     \HyField@SetFlag{Submit}{SubmitPDF}%
5934     \HyField@UseFlag{Submit}{GetMethod}%
5935   \fi
5936   \HyField@PrintFlags{Submit}{submit button field}%
5937   \bitsetIsEmpty{HyField@Submit}{%
5938     \let\Fld@submitflags\ltx@empty
5939   }\{%
5940     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5941   }\%
5942 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5943 \def\HyField@FlagsAnnot#1{%
5944   \bitsetReset{HyField@F}%
5945   \HyField@UseFlag{F}{Invisible}%
5946   \HyField@UseFlag{F}{Hidden}%

```

```

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

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5961 \def\HyField@FlagsPushButton{%
5962   \HyField@FlagsAnnot{push button field}%
5963   \bitsetReset{HyField@Ff}%
5964   \HyField@UseFlag{Ff}{ReadOnly}%
5965   \HyField@UseFlag{Ff}{Required}%
5966   \HyField@UseFlag{Ff}{NoExport}%
5967   \HyField@SetFlag{Ff}{Pushbutton}%
5968   \HyField@PrintFlags{Ff}{push button field}%
5969   \bitsetIsEmpty{HyField@Ff}{%
5970     \let\Fld@flags\ltx@empty
5971   }{%
5972     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5973   }%
5974 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5975 \def\HyField@FlagsCheckBox{%
5976   \HyField@FlagsAnnot{check box field}%
5977   \bitsetReset{HyField@Ff}%
5978   \HyField@UseFlag{Ff}{ReadOnly}%
5979   \HyField@UseFlag{Ff}{Required}%
5980   \HyField@UseFlag{Ff}{NoExport}%
5981   \HyField@PrintFlags{Ff}{check box field}%
5982   \bitsetIsEmpty{HyField@Ff}{%
5983     \let\Fld@flags\ltx@empty
5984   }{%
5985     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5986   }%
5987 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5988 \def\HyField@FlagsRadioButton{%
5989   \HyField@FlagsAnnot{radio button field}%
5990   \bitsetReset{HyField@Ff}%
5991   \HyField@UseFlag{Ff}{ReadOnly}%

```

```

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

```

20.1.7 Text fields

\HyField@FlagsText

```

6004 \def\HyField@FlagsText{%
6005   \HyField@FlagsAnnot{text field}%
6006   \bitsetReset{HyField@Ff}%
6007   \HyField@UseFlag{Ff}{ReadOnly}%
6008   \HyField@UseFlag{Ff}{Required}%
6009   \HyField@UseFlag{Ff}{NoExport}%
6010   \HyField@UseFlag{Ff}{Multiline}%
6011   \HyField@UseFlag{Ff}{Password}%
6012   \HyField@UseFlag{Ff}{FileSelect}%
6013   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6014   \HyField@UseFlag{Ff}{DoNotScroll}%
6015   \ifFld@comb
6016     \ifcase0\ifFld@multiline
6017       \else\ifFld@password
6018       \else\ifFld@fileselect
6019       \else 1\fi\fi\fi\relax
6020     \Hy@Error{%
6021       Field option `comb' cannot used together with\MessageBreak
6022       `multiline', `password', or `fileselect'%
6023     }\@ehc
6024   \else
6025     \HyField@UseFlag{Ff}{Comb}%
6026   \fi
6027 \fi
6028 \HyField@UseFlag{Ff}{RichText}%
6029 \HyField@PrintFlags{Ff}{text field}%
6030 \bitsetIsEmpty{HyField@Ff}{%
6031   \let\Fld@flags\ltx@empty
6032 }{%
6033   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6034 }%
6035 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

6036 \def\HyField@FlagsChoice{%
6037   \HyField@FlagsAnnot{choice field}%
6038   \bitsetReset{HyField@Ff}%
6039   \HyField@UseFlag{Ff}{ReadOnly}%
6040   \HyField@UseFlag{Ff}{Required}%

```

```

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

```

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`.

```

6061 \def\HyField@PDFChoices#1{%
6062   \begingroup
6063   \global\let\Fld@choices\ltx@empty
6064   \let\HyTmp@optlist\ltx@empty
6065   \let\HyTmp@optitem\relax
6066   \count@=0 %
6067   \kv@parse{#1}{%
6068     \Hy@pdfstringdef\kv@key\kv@key
6069     \ifx\kv@value\relax
6070       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
6071         \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}%
6072       \else
6073         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6074       \fi
6075     \else
6076       \Hy@pdfstringdef\kv@value\kv@value
6077       \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}%
6078     \fi
6079     \edef\HyTmp@optlist{%
6080       \HyTmp@optlist
6081       \HyTmp@optitem{\the\count@}{\kv@key}0%
6082     }%
6083     \advance\count@ by 1 %
6084     \@gobbletwo
6085   }%
6086   \xdef\Fld@choices{/Opt[\Fld@choices]}%
6087   \ifFld@multiselect
6088     \HyField@@PDFChoices{DV}\Fld@default
6089     \HyField@@PDFChoices{V}\Fld@value
6090   \else

```

```

6091 \ifx\Fld@default\relax
6092 \else
6093 \pdfstringdef\Hy@gtemp\Fld@default
6094 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}}%
6095 \fi
6096 \ifx\Fld@value\relax
6097 \else
6098 \pdfstringdef\Hy@gtemp\Fld@value
6099 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}}%
6100 \fi
6101 \fi
6102 \endgroup
6103 }

```

\HyField@@PDFChoices

```

6104 \def\HyField@@PDFChoices#1#2{%
6105 \ifx#2\relax
6106 \else
6107 \count@=0 %
6108 \def\HyTmp@optitem##1##2##3{%
6109 \def\HyTmp@key{##2}%
6110 \ifx\HyTmp@key\Hy@gtemp
6111 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6112 \HyTmp@optlist
6113 \HyTmp@optitem{##1}{##2}1%
6114 }%
6115 \let\HyTmp@found=Y%
6116 \else
6117 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6118 \HyTmp@optlist
6119 \HyTmp@optitem{##1}{##2}##3%
6120 }%
6121 \fi
6122 }%
6123 \expandafter\comma@parse\expandafter{#2}{%
6124 \pdfstringdef\Hy@gtemp\comma@entry
6125 \let\HyTmp@found=N %
6126 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6127 \HyTmp@optlist
6128 \ifx\HyTmp@found Y%
6129 \advance\count@ by 1 %
6130 \else
6131 \@onelevel@sanitize\comma@entry
6132 \PackageWarning{hyperref}{%
6133 \string\ChoiceBox: Ignoring value `\'comma@entry',%
6134 \MessageBreak
6135 it cannot be found in the choices%
6136 }%
6137 \fi
6138 \@gobble
6139 }%
6140 \def\HyTmp@optitem##1##2##3{%
6141 \ifnum##3=1 %
6142 (##2)%
6143 \fi
6144 }%
6145 \ifcase\count@
6146 \or

```

```

6147 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6148 \else
6149 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6150 \ifx#1V%
6151 \def\HyTmp@optitem##1##2##3{%
6152 \ifnum##3=1 %
6153 \@firstofone{ ##1}%
6154 \fi
6155 }%
6156 \edef\HyTmp@optlist{\HyTmp@optlist}%
6157 \xdef\Fld@choices{%
6158 \Fld@choices
6159 /I\expandafter\@firstofone\HyTmp@optlist}%
6160 }%
6161 \fi
6162 \fi
6163 \fi
6164 }

```

20.3 Forms

\HyField@SetKeys

```

6165 \def\HyField@SetKeys{%
6166 \kvsetkeys{Field}%
6167 }

6168 \newif\ifFld@checked
6169 \newif\ifFld@disabled
6170 \Fld@checkedfalse
6171 \Fld@disabledfalse
6172 \newcount\Fld@menulength
6173 \newdimen\Field@Width
6174 \newdimen\Fld@charsize
6175 \Fld@charsize=10\p@
6176 \def\Fld@maxlen{0}
6177 \def\Fld@align{0}
6178 \def\Fld@color{0 0 0 rg}
6179 \def\Fld@bcolor{1 1 1}
6180 \def\Fld@bordercolor{1 0 0}
6181 \def\Fld@bordersep{1\p@}
6182 \def\Fld@borderwidth{1}
6183 \def\Fld@borderstyle{S}
6184 \def\Fld@cbsymbol{4}
6185 \def\Fld@radiosymbol{H}
6186 \def\Fld@rotation{0}
6187 \def\Fld@Form{\@ifnextchar{\@Form}{\@Form[]}}
6188 \def\endForm{\@endForm}
6189 \newif\ifForm@html
6190 \Form@htmlfalse
6191 \def\Fld@boolkey#1#2{%
6192 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6193 }
6194 \define@key{Form}{action}{%
6195 \hyper@normalise\Hy@DefFormAction{#1}%
6196 }
6197 \def\Hy@DefFormAction{\def\Fld@action}
6198 \def\enc@html{html}

```



```

6199 \define@key{Form}{encoding}{%
6200   \def\Hy@tempa{#1}%
6201   \ifx\Hy@tempa\enc@html
6202     \Form@htmltrue
6203     \def\Fld@export{html}%
6204   \else
6205     \Hy@Warning{%
6206       Form `encoding' key with \MessageBreak
6207       unknown value `#1'%
6208     }%
6209     \Form@htmlfalse
6210   \fi
6211 }
6212 \define@key{Form}{method}{%
6213   \lowercase{\def\Hy@temp{#1}}%
6214   \@ifundefined{Form@method@\Hy@temp}{%
6215     \@onelevel@sanitize\Hy@temp
6216     \Hy@Error{%
6217       Unknown method ``\Hy@temp'.\MessageBreak
6218       Known values are `post' and `get'%
6219     } \@ehc
6220   }{%
6221     \let\Form@method\Hy@temp
6222     \ifcase\@nameuse{Form@method@\Hy@temp} %
6223       \Fld@getmethodfalse
6224     \else
6225       \Fld@getmethodtrue
6226     \fi
6227   }%
6228 }
6229 \def\Form@method{}
6230 \@namedef{Form@method@post}{0}
6231 \@namedef{Form@method@get}{1}
6232 \newif\ifHyField@NeedAppearances
6233 \def\HyField@NeedAppearancesfalse{%
6234   \global\let\ifHyField@NeedAppearances\iffalse
6235 }
6236 \def\HyField@NeedAppearancetrue{%
6237   \global\let\ifHyField@NeedAppearances\iftrue
6238 }
6239 \HyField@NeedAppearancetrue
6240 \define@key{Form}{NeedAppearances}[true]{%
6241   \edef\Hy@tempa{#1}%
6242   \ifx\Hy@tempa\Hy@true
6243     \HyField@NeedAppearancetrue
6244   \else
6245     \ifx\Hy@tempa\Hy@false
6246       \HyField@NeedAppearancesfalse
6247     \else
6248       \Hy@Error{%
6249         Unexpected value ``\Hy@tempa'\MessageBreak
6250         of option `NeedAppearances' instead of\MessageBreak
6251         `true' or `false'%
6252       } \@ehc
6253     \fi
6254   \fi
6255 }

```

```

6256 \def\Field@boolkey#1#2{%
6257   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6258 }
6259 \ifHy@texht
6260   \newtoks\Field@toks
6261   \Field@toks={ }%
6262   \def\Field@addtoks#1#2{%
6263     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6264     \@processme
6265   }%
6266 \else
6267   \def\Hy@WarnHTMLFieldOption#1{%
6268     \Hy@Warning{%
6269       HTML field option `#1'\MessageBreak
6270       is ignored%
6271     }%
6272   }%
6273 \fi
6274 \def\Fld@checkequals#1=#2=#3\\{%
6275   \def\@currDisplay{#1}%
6276   \ifx\\#2\\%
6277     \def\@currValue{#1}%
6278   \else
6279     \def\@currValue{#2}%
6280   \fi
6281 }
6282 \define@key{Field}{loc}{%
6283   \def\Fld@loc{#1}%
6284 }
6285 \define@key{Field}{checked}[true]{%
6286   \lowercase{\Field@boolkey{#1}}{checked}%
6287 }
6288 \define@key{Field}{disabled}[true]{%
6289   \lowercase{\Field@boolkey{#1}}{disabled}%
6290 }
6291 \ifHy@texht
6292   \define@key{Field}{accesskey}{%
6293     \Field@addtoks{accesskey}{#1}%
6294   }%
6295   \define@key{Field}{tabkey}{%
6296     \Field@addtoks{tabkey}{#1}%
6297   }%
6298 \else
6299   \define@key{Field}{accesskey}{%
6300     \Hy@WarnHTMLFieldOption{accesskey}%
6301   }%
6302   \define@key{Field}{tabkey}{%
6303     \Hy@WarnHTMLFieldOption{tabkey}%
6304   }%
6305 \fi
6306 \define@key{Field}{name}{%
6307   \def\Fld@name{#1}%
6308 }
6309 \let\Fld@altname\relax
6310 \define@key{Field}{altname}{%
6311   \def\Fld@altname{#1}%
6312 }

```

```

6313 \let\Fld@mappingname\relax
6314 \define@key{Field}{mappingname}{%
6315   \def\Fld@mappingname{#1}%
6316 }
6317 \define@key{Field}{width}{%
6318   \def\Fld@width{#1}%
6319   \Field@Width#1\setbox0=\hbox{m}%
6320 }
6321 \define@key{Field}{maxlen}{%
6322   \def\Fld@maxlen{#1}%
6323 }
6324 \define@key{Field}{menulength}{%
6325   \Fld@menulength=#1\relax
6326 }
6327 \define@key{Field}{height}{%
6328   \def\Fld@height{#1}%
6329 }
6330 \define@key{Field}{charsize}{%
6331   \setlength{\Fld@charsize}{#1}%
6332 }
6333 \define@key{Field}{borderwidth}{%
6334   \Hy@defaultbp\Fld@borderwidth{#1}%
6335 }
6336 \def\Hy@defaultbp#1#2{%
6337   \begingroup
6338   \afterassignment\Hy@defaultbpAux
6339   \dimen@=#2bp\relax{#1}{#2}%
6340 }
6341 \begingroup\expandafter\expandafter\expandafter\endgroup
6342 \expandafter\ifx\csname dimexpr\endcsname\relax
6343   \def\Hy@defaultbpAux#1\relax#2#3{%
6344     \ifx!#1!%
6345       \endgroup
6346       \def#2{#3}%
6347     \else
6348       \dimen@=.99626\dimen@
6349       \edef\x{\endgroup
6350         \def\noexpand#2{%
6351           \strip@pt\dimen@
6352         }%
6353       }\x
6354     \fi
6355   }%
6356 \else
6357   \def\Hy@defaultbpAux#1\relax#2#3{%
6358     \ifx!#1!%
6359       \endgroup
6360       \def#2{#3}%
6361     \else
6362       \edef\x{\endgroup
6363         \def\noexpand#2{%
6364           \strip@pt\dimexpr\dimen@*800/803\relax
6365         }%
6366       }\x
6367     \fi
6368   }%
6369 \fi

```

```

6370 \define@key{Field}{borderstyle}{%
6371   \let\Hy@temp\Fld@borderstyle
6372   \def\Fld@borderstyle{#1}%
6373   \Hy@Match\Fld@borderstyle}{}%
6374   ^[SDBIU]$%
6375 }{}{%
6376   \Hy@Warning{%
6377     Invalid value ` \@pdfborderstyle'\MessageBreak
6378     for option `pdfborderstyle'. Valid values:\MessageBreak
6379     \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6380     \space\space I (Inset), U (Underline)\MessageBreak
6381     Option setting is ignored%
6382   }%
6383   \let\Fld@borderstyle\Hy@temp
6384 }%
6385 }
6386 \define@key{Field}{bordersep}{%
6387   \def\Fld@bordersep{#1}%
6388 }
6389 \define@key{Field}{default}{%
6390   \def\Fld@default{#1}%
6391 }
6392 \define@key{Field}{align}{%
6393   \def\Fld@align{#1}%
6394 }
6395 \define@key{Field}{value}{%
6396   \Hy@pdfstringdef\Fld@value{#1}%
6397 }
6398 \define@key{Field}{checkboxsymbol}{%
6399   \Fld@DingDef\Fld@cbsymbol{#1}%
6400 }
6401 \define@key{Field}{radiosymbol}{%
6402   \Fld@DingDef\Fld@radiosymbol{#1}%
6403 }
6404 \def\Fld@DingDef#1#2{%
6405   \let\Fld@temp\ltx@empty
6406   \Fld@@@DingDef#2\ding{}\@nil
6407   \let#1\Fld@temp
6408 }
6409 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6410   \expandafter\def\expandafter\Fld@temp\expandafter{%
6411     \Fld@temp
6412     #1%
6413   }%
6414   \ifx\#3\%
6415     \expandafter\@gobble
6416   \else
6417     \begingroup
6418       \lccode`0=#2\relax
6419       \lowercase{\endgroup
6420         \expandafter\def\expandafter\Fld@temp\expandafter{%
6421           \Fld@temp
6422           0%
6423         }%
6424       }%
6425     \expandafter\@firstofone
6426   \fi

```

```

6427  {%
6428    \Fld@@DingDef#3\@nil
6429  }%
6430 }

6431 \define@key{Field}{rotation}{%
6432   \def\Fld@rotation{#1}%
6433 }

6434 \define@key{Field}{backgroundcolor}{%
6435   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6436 }
6437 \define@key{Field}{bordercolor}{%
6438   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6439 }
6440 \define@key{Field}{color}{%
6441   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6442 }

6443 \let\Fld@onclick@code\ltx@empty
6444 \let\Fld@format@code\ltx@empty
6445 \let\Fld@validate@code\ltx@empty
6446 \let\Fld@calculate@code\ltx@empty
6447 \let\Fld@keystroke@code\ltx@empty
6448 \let\Fld@onfocus@code\ltx@empty
6449 \let\Fld@onblur@code\ltx@empty
6450 \let\Fld@onmousedown@code\ltx@empty
6451 \let\Fld@onmouseup@code\ltx@empty
6452 \let\Fld@onenter@code\ltx@empty
6453 \let\Fld@onexit@code\ltx@empty
6454 \def\Hy@temp#1{%
6455   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6456 }
6457 \def\Hy@@temp#1#2{%
6458   \ifHy@pdfa
6459     \define@key{Field}{#2}{%
6460       \Hy@Error{%
6461         PDF/A: Additional action `#2' is prohibited%
6462       } \@ehc
6463     }%
6464   \else
6465     \define@key{Field}{#2}{%
6466       \def#1{##1}%
6467     }%
6468   \fi
6469 }
6470 \Hy@temp{keystroke}
6471 \Hy@temp{format}
6472 \Hy@temp{validate}
6473 \Hy@temp{calculate}
6474 \Hy@temp{onfocus}
6475 \Hy@temp{onblur}
6476 \Hy@temp{onenter}
6477 \Hy@temp{onexit}

6478 \let\Fld@calculate@sortkey\ltx@empty
6479 \define@key{Field}{calculatesortkey}[1]{%
6480   \def\Fld@calculate@sortkey{#1}%
6481 }

```

```

6482 \ifHy@texht
6483   \def\Hy@temp#1{%
6484     \define@key{Field}{#1}{%
6485       \Field@addtoks{#1}{##1}%
6486     }%
6487   }%
6488 \else
6489   \def\Hy@temp#1{%
6490     \define@key{Field}{#1}{%
6491       \Hy@WarnHTMLFieldOption{#1}%
6492     }%
6493   }%
6494 \fi
6495 \Hy@temp{ondblclick}
6496 \Hy@temp{onmousedown}
6497 \Hy@temp{onmouseup}
6498 \Hy@temp{onmouseover}
6499 \Hy@temp{onmousemove}
6500 \Hy@temp{onmouseout}
6501 \Hy@temp{onkeydown}
6502 \Hy@temp{onkeyup}
6503 \Hy@temp{onselect}
6504 \Hy@temp{onchange}
6505 \Hy@temp{onkeypress}
6506 \ifHy@texht
6507   \define@key{Field}{onclick}{%
6508     \Field@addtoks{onclick}{#1}%
6509   }%
6510 \else
6511   \ifHy@pdfa
6512     \define@key{Field}{onclick}{%
6513       \Hy@Error{%
6514         PDF/A: Action `onclick' is prohibited%
6515       } \@ehc
6516     }%
6517   \else
6518     \define@key{Field}{onclick}{%
6519       \def\Fld@onclick@code{#1}%
6520     }%
6521   \fi
6522 \fi

6523 \DeclareRobustCommand\TextField{%
6524   \@ifnextchar[{\@TextField}{\@TextField[]}%
6525 }
6526 \DeclareRobustCommand\ChoiceMenu{%
6527   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6528 }
6529 \DeclareRobustCommand\CheckBox{%
6530   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6531 }
6532 \DeclareRobustCommand\PushButton{%
6533   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6534 }
6535 \DeclareRobustCommand\Gauge{%
6536   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6537 }
6538 \DeclareRobustCommand\Submit{%

```

```

6539 \@ifnextchar[{\@Submit}{\@Submit[]}%
6540 }
6541 \DeclareRobustCommand\Reset{%
6542 \@ifnextchar[{\@Reset}{\@Reset[]}%
6543 }
6544 \def\LayoutTextField#1#2{% label, field
6545 #1 #2%
6546 }
6547 \def\LayoutChoiceField#1#2{% label, field
6548 #1 #2%
6549 }
6550 \def\LayoutCheckField#1#2{% label, field
6551 #1 #2%
6552 }
6553 \def\LayoutPushButtonField#1{% button
6554 #1%
6555 }
6556 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6557 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6558 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6559 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6560 \def\MakeButtonField#1{%
6561 \sbox0{%
6562 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6563 }%
6564 \@tempdima\ht0 %
6565 \advance\@tempdima by \Fld@borderwidth bp %
6566 \advance\@tempdima by \Fld@borderwidth bp %
6567 \ht0\@tempdima
6568 \@tempdima\dp0 %
6569 \advance\@tempdima by \Fld@borderwidth bp %
6570 \advance\@tempdima by \Fld@borderwidth bp %
6571 \dp0\@tempdima
6572 \box0\relax
6573 }
6574 \def\DefaultHeightofSubmit{14pt}
6575 \def\DefaultWidthofSubmit{2cm}
6576 \def\DefaultHeightofReset{14pt}
6577 \def\DefaultWidthofReset{2cm}
6578 \def\DefaultHeightofCheckBox{\baselineskip}
6579 \def\DefaultWidthofCheckBox{\baselineskip}
6580 \def\DefaultHeightofChoiceMenu{\baselineskip}
6581 \def\DefaultWidthofChoiceMenu{\baselineskip}
6582 \def\DefaultHeightofText{\baselineskip}
6583 \def\DefaultHeightofTextMultiline{4\baselineskip}
6584 \def\DefaultWidthofText{3cm}
6585 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6586 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6587 \def\DefaultOptionsofPushButton{print}
6588 \def\DefaultOptionsofCheckBox{print}
6589 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6590 \def\DefaultOptionsofListBox{print}
6591 \def\DefaultOptionsofComboBox{print,edit,sort}
6592 \def\DefaultOptionsofPopdownBox{print}
6593 \def\DefaultOptionsofRadio{print,notoggetooff}

```

21 Setup

```

6594 \ifHy@hyperfigures
6595   \Hy@Info{Hyper figures ON}%
6596 \else
6597   \Hy@Info{Hyper figures OFF}%
6598 \fi
6599 \ifHy@nesting
6600   \Hy@Info{Link nesting ON}%
6601 \else
6602   \Hy@Info{Link nesting OFF}%
6603 \fi
6604 \ifHy@hyperindex
6605   \Hy@Info{Hyper index ON}%
6606 \else
6607   \Hy@Info{Hyper index OFF}%
6608 \fi
6609 \ifHy@backref
6610   \Hy@Info{backreferencing ON}%
6611 \else
6612   \Hy@Info{backreferencing OFF}%
6613 \fi
6614 \ifHy@colorlinks
6615   \Hy@Info{Link coloring ON}%
6616 \else
6617   \Hy@Info{Link coloring OFF}%
6618 \fi
6619 \ifHy@ocgcolorlinks
6620   \Hy@Info{Link coloring with OCG ON}%
6621 \else
6622   \Hy@Info{Link coloring with OCG OFF}%
6623 \fi
6624 \ifHy@pdfa
6625   \Hy@Info{PDF/A mode ON}%
6626 \else
6627   \Hy@Info{PDF/A mode OFF}%
6628 \fi

```

22 Low-level utility macros

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

```

6629 \edef\hyper@hash{\string#}
6630 \edef\hyper@tilde{\string~}
6631 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6632 \def\@currentHref{Doc-Start}
6633 \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.

```

6634 \Hy@AtBeginDocument{%
6635   \Hy@pdfstringtrue
6636   \PDF@SetupDoc
6637   \let\PDF@SetupDoc\@empty
6638   \Hy@DisableOption{pdfpagescrop}%
6639   \Hy@DisableOption{pdfpagemode}%

```



```

6640 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6641 \Hy@DisableOption{pdfdirection}%
6642 \Hy@DisableOption{pdfviewarea}%
6643 \Hy@DisableOption{pdfviewclip}%
6644 \Hy@DisableOption{pdfprintarea}%
6645 \Hy@DisableOption{pdfprintclip}%
6646 \Hy@DisableOption{pdfprintscaling}%
6647 \Hy@DisableOption{pdfduplex}%
6648 \Hy@DisableOption{pdfpicktraybypdfsize}%
6649 \Hy@DisableOption{pdfprintpagerange}%
6650 \Hy@DisableOption{pdfnumcopies}%
6651 \Hy@DisableOption{pdfstartview}%
6652 \Hy@DisableOption{pdfstartpage}%
6653 \Hy@DisableOption{pdftoolbar}%
6654 \Hy@DisableOption{pdfmenubar}%
6655 \Hy@DisableOption{pdfwindowui}%
6656 \Hy@DisableOption{pdfitwindow}%
6657 \Hy@DisableOption{pdfcenterwindow}%
6658 \Hy@DisableOption{pdfdisplaydoctitle}%
6659 \Hy@DisableOption{pdfpagelayout}%
6660 \Hy@DisableOption{pdflang}%
6661 \Hy@DisableOption{baseurl}%
6662 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6663 \Hy@pdfstringfalse
6664 }

```

Ignore star from referencing macros:

```

6665 \LetLtxMacro\NoHy@OrgRef\ref
6666 \DeclareRobustCommand*{\ref}{\%
6667 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6668 }
6669 \LetLtxMacro\NoHy@OrgPageRef\pageref
6670 \DeclareRobustCommand*{\pageref}{\%
6671 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6672 }

```

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.

```

6673 \def\NoHyper{%
6674 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6675 \def\hyper@anchor##1##2{##2\Hy@xspace@end}%
6676 \global\let\hyper@livelink\hyper@link
6677 \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6678 \let\hyper@anchor\ltx@gobble
6679 \let\hyper@anchorstart\ltx@gobble
6680 \def\hyper@anchorend{\Hy@xspace@end}%
6681 \let\hyper@linkstart\ltx@gobbletwo
6682 \def\hyper@linkend{\Hy@xspace@end}%
6683 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6684 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6685 \let\Hy@backout\@gobble
6686 }

```

```

6687 \def\stop@hyper{%
6688   \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6689   \let\Hy@backout\@gobble
6690   \let\hyper@@anchor\ltx@gobble
6691   \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6692   \let\hyper@anchor\ltx@gobble
6693   \let\hyper@anchorstart\ltx@gobble
6694   \def\hyper@anchorend{\Hy@xspace@end}%
6695   \let\hyper@linkstart\ltx@gobbletwo
6696   \def\hyper@linkend{\Hy@xspace@end}%
6697   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6698   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6699 }
6700 \def\endNoHyper{%
6701   \global\let\hyper@link\hyper@livelink
6702 }
6703 \endpackage

```

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:

```

6704 (*nohyperref)
6705 \RequirePackage{letltxmacro}[2008/06/13]
6706 \let\hyper@@anchor\@gobble
6707 \def\hyper@link##1##2##3{##3}%
6708 \let\hyper@anchorstart\@gobble
6709 \let\hyper@anchorend\@empty
6710 \let\hyper@linkstart\@gobbletwo
6711 \let\hyper@linkend\@empty
6712 \def\hyper@linkurl##1##2{##1}%
6713 \def\hyper@linkfile##1##2##3{##1}%
6714 \def\hyper@link@{##1}##2##3}%
6715 \let\PDF@SetupDoc\@empty
6716 \let\PDF@FinishDoc\@empty
6717 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6718 \def\Acrobatmenu##1##2{\leavevmode#2}
6719 \let\pdfstringdefDisableCommands\@gobbletwo
6720 \let\texorpdfstring\@firstoftwo
6721 \let\pdfbookmark\@undefined
6722 \newcommand\pdfbookmark[3][]{ }
6723 \let\phantomsection\@empty
6724 \let\hypersetup\@gobble
6725 \let\hyperbaseurl\@gobble
6726 \newcommand*{\href}[3][]{#3}
6727 \let\hyperdef\@gobbletwo
6728 \let\hyperlink\@gobble
6729 \let\hypertarget\@gobble
6730 \def\hyperref{%
6731   \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%

```

```

6732 }
6733 \long\def\@gobbleopt[#1]{ }
6734 \let\hyperpage\@empty
Ignore star from referencing macros:
6735 \LetLtxMacro\NoHy@OrgRef\ref
6736 \DeclareRobustCommand*\ref{%
6737   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6738 }
6739 \LetLtxMacro\NoHy@OrgPageRef\pageref
6740 \DeclareRobustCommand*\pageref{%
6741   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6742 }
6743 \nohyperref

```

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}`

```

6744 \*package
6745 \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.

```

6746 \if@filesw
6747   \ifHy@typexml
6748     \immediate\closeout\@mainaux
6749     \immediate\openout\@mainaux\jobname.aux\relax
6750     \immediate\write\@auxout{<relaxxml>\relax}%
6751   \fi
6752   \immediate\write\@auxout{%
6753     \string\providecommand\string\HyperFirstAtBeginDocument{%
6754       \string\AtBeginDocument}^^J%
6755     \string\HyperFirstAtBeginDocument{%
6756       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6757       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6758       \string\gdef\string\contentsline%
6759         \string#1\string#2\string#3\string#4{%
6760         \string\oldcontentsline%
6761         {\string#1}{\string#2}{\string#3}}^^J%
6762       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6763       \string\gdef\string\newlabel\string#1\string#2{%
6764       \string\newlabelxx{\string#1}\string#2}^^J%
6765       \string\gdef\string\newlabelxx%
6766         \string#1\string#2\string#3\string#4\string#5\string#6{%
6767         \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.

```

6768     \string\AtEndDocument{%
6769       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6770       \string\let\string\contentsline\string\oldcontentsline^^J%
6771       \string\let\string\newlabel\string\oldnewlabel^^J%
6772     \string\fi%
6773   }^^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.

```

6774 \string\fi%
6775 }^^J%
6776 \string\global\string\let\string\hyper@last\relax^^J%
6777 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6778 }%
6779 \fi
6780 \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.

```

6781 \ifx\hyper@last\@undefined
6782 \def\@starttoc#1{%
6783 \begingroup
6784 \makeatletter
6785 \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6786 \IfFileExists{\jobname.#1}{%
6787 \Hy@WarningNoLine{%
6788 old #1 file detected, not used; run LaTeX again%
6789 }%
6790 }{}%
6791 \if@files@w
6792 \expandafter\newwrite\csname tf@#1\endcsname
6793 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6794 \fi
6795 \@nobreakfalse
6796 \endgroup
6797 }%
6798 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{}{}{}}%
6799 \fi
6800 }

```

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.

```

6801 \ifHy@pdfusetitle
6802 \let\HyOrg@title\title
6803 \let\HyOrg@author\author
6804 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6805 \def\Hy@scanopttitle[#1]{%
6806 \gdef\Hy@title{#1}%
6807 \HyOrg@title{#1}%
6808 }%
6809 \def\Hy@scantitle#1{%
6810 \gdef\Hy@title{#1}%
6811 \HyOrg@title{#1}%
6812 }%
6813 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6814 \def\Hy@scanoptauthor[#1]{%
6815 \gdef\Hy@author{#1}%
6816 \HyOrg@author{#1}%

```

```

6817 }%
6818 \def\Hy@scanauthor#1{%
6819   \gdef\Hy@author{#1}%
6820   \HyOrg@author{#1}%
6821 }%

```

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.

```

6822 \begingroup
6823   \def\process@me#1\@nil#2{%
6824     \expandafter\let\expandafter\x\csname @#2\endcsname
6825     \edef\y{\expandafter\strip@prefix\meaning\x}%
6826     \def\c##1#1##2\@nil{%
6827       \ifx\\##1\\%
6828         \else
6829           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6830             \expandafter{\x}%
6831         \fi
6832       }%
6833       \expandafter\c\y\relax#1\@nil
6834     }%
6835     \expandafter\process@me\string\@latex@\@nil{title}%
6836     \expandafter\process@me\string\@latex@\@nil{author}%
6837   \endgroup
6838 \fi
6839 \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 ¹removes its argument.

```

6840 \def\Hy@UseMaketitleString#1{%
6841   \ltx@ifundefined{Hy@#1}{-}{%
6842     \begingroup
6843       \let\Hy@saved@hook\pdfstringdefPreHook
6844       \pdfstringdefDisableCommands{%
6845         \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6846         \let\newline\\%
6847         \def\and{; }%
6848         \let\thanks\@gobble%
6849       }%
6850       \expandafter\ifx\csname @pdf#1\endcsname\@empty
6851         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6852           \csname Hy@#1\endcsname\@empty
6853         }%
6854       \fi
6855       \global\let\pdfstringdefPreHook\Hy@saved@hook
6856     \endgroup
6857   }%
6858 }

```

```

6859 \def\Hy@newline@title#1{ #1}
6860 \def\Hy@newline@author#1{, #1}
6861 \def\Hy@UseMaketitleInfos{%
6862   \Hy@UseMaketitleString{title}%
6863   \Hy@UseMaketitleString{author}%
6864 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6865 \RequirePackage{atbegshi}[2007/09/09]
6866 \let\Hy@EveryPageHook\ltx@empty
6867 \let\Hy@EveryPageBoxHook\ltx@empty
6868 \let\Hy@FirstPageHook\ltx@empty
6869 \AtBeginShipout{%
6870   \Hy@EveryPageHook
6871   \ifx\Hy@EveryPageBoxHook\ltx@empty
6872   \else
6873     \setbox\AtBeginShipoutBox=\vbox{%
6874       \offinterlineskip
6875       \Hy@EveryPageBoxHook
6876       \box\AtBeginShipoutBox
6877     }%
6878   \fi
6879 }
6880 \ltx@iffileloaded{hpdftex.def}{%
6881   \AtBeginShipout{%
6882     \Hy@FirstPageHook
6883     \global\let\Hy@FirstPageHook\ltx@empty
6884   }%
6885 }{%
6886   \AtBeginShipoutFirst{%
6887     \Hy@FirstPageHook
6888   }%
6889 }
6890 \g@addto@macro\Hy@FirstPageHook{%
6891   \PDF@FinishDoc
6892   \global\let\PDF@FinishDoc\ltx@empty
6893 }

```

28.1 PDF /PageLabels

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

```

6894 \ifHy@pdfpagelabels
6895   \begingroup\expandafter\expandafter\expandafter\endgroup
6896   \expandafter\ifx\csname thepage\endcsname\relax
6897     \Hy@pdfpagelabelsfalse
6898     \Hy@WarningNoLine{%
6899       Option `pdfpagelabels' is turned off\MessageBreak
6900       because \string\thepage\space is undefined%
6901     }%
6902     \csname fi\endcsname
6903     \csname iffalse\expandafter\endcsname

```

6904 \fi

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

```
6905 \def\thispdfpagelabel#1{%
6906   \gdef\HyPL@thisLabel{#1}%
6907 }%
6908 \global\let\HyPL@thisLabel\relax
```

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

```
6909 \let\HyPL@Labels\ltx@empty
```

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

```
6910 \newcount\Hy@abspage
6911 \Hy@abspage=0 %
```

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

```
6912 \def\HyPL@LastType{init}%
6913 \def\HyPL@LastNumber{0}%
6914 \let\HyPL@LastPrefix\ltx@empty
```

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

```
6915 \def\HyPL@arabic{D}%
6916 \def\HyPL@Roman{R}%
6917 \def\HyPL@roman{r}%
6918 \def\HyPL@Alph{A}%
6919 \def\HyPL@alph{a}%

6920 \let\HyPL@SlidesSetPage\ltx@empty
6921 \ltx@ifclassloaded{slides}{%
6922   \def\HyPL@SlidesSetPage{%
6923     \advance\c@page\ltx@one
6924     \ifnum\value{page}>\ltx@one
6925       \protected@edef\HyPL@SlidesOptionalPage{%
6926         \Hy@SlidesFormatOptionalPage{\thepage}%
6927       }%
6928     \else
6929       \let\HyPL@SlidesOptionalPage\ltx@empty
6930     \fi
6931     \advance\c@page-\ltx@one
6932     \def\HyPL@page{%
6933       \csname the\Hy@SlidesPage\endcsname
6934       \HyPL@SlidesOptionalPage
6935     }%
6936   }%
6937 }{}%
```

\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.

```
6938 \def\HyPL@EveryPage{%
6939   \begingroup
6940   \ifx\HyPL@thisLabel\relax
6941     \let\HyPL@page\thepage
6942     \HyPL@SlidesSetPage
6943   \else
6944     \let\HyPL@page\HyPL@thisLabel
```

```

6945 \global\let\HyPL@thisLabel\relax
6946 \fi
6947 \let\HyPL@Type\relax
6948 \ifnum\c@page>0 %
6949 \ifx\HyPL@SlidesSetPage\ltx@empty
6950 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6951 \fi
6952 \fi
6953 \let\Hy@temp Y%
6954 \ifx\HyPL@Type\HyPL@LastType
6955 \else
6956 \let\Hy@temp N%
6957 \fi
6958 \ifx\HyPL@Type\relax
6959 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6960 \else
6961 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6962 \fi
6963 \ifx\HyPL@Prefix\HyPL@LastPrefix
6964 \else
6965 \let\Hy@temp N%
6966 \fi
6967 \if Y\Hy@temp
6968 \advance\c@page by -1 %
6969 \ifnum\HyPL@LastNumber=\the\c@page\relax
6970 \else
6971 \let\Hy@temp N%
6972 \fi
6973 \Hy@StepCount\c@page
6974 \fi
6975 \if N\Hy@temp
6976 \ifx\HyPL@Type\relax
6977 \HyPL@storePageLabel{/P(\HyPL@Prefix)}%
6978 \else
6979 \HyPL@storePageLabel{%
6980 \ifx\HyPL@Prefix\@empty
6981 \else
6982 /P(\HyPL@Prefix)%
6983 \fi
6984 /S/\csname HyPL\HyPL@Type\endcsname
6985 \ifnum\the\c@page=1 %
6986 \else
6987 \space/St \the\c@page
6988 \fi
6989 }%
6990 \fi
6991 \fi
6992 \xdef\HyPL@LastNumber{\the\c@page}%
6993 \global\let\HyPL@LastType\HyPL@Type
6994 \global\let\HyPL@LastPrefix\HyPL@Prefix
6995 \endgroup
6996 \Hy@GlobalStepCount\Hy@abspage
6997 }%

```

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

```

6998 \def\HyPL@CheckThePage#1\@nil{%
6999 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
7000 }%

```


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

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

```

7001 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
7002   \def\Hy@tempa{#4}%
7003   \def\Hy@tempb{\csname\endcsname\c@page}%
7004   \ifx\Hy@tempa\Hy@tempb
7005     \expandafter\ifx\csname HyPL#3\endcsname\relax
7006     \else
7007       \def\HyPL@Type{#3}%
7008       \def\HyPL@Prefix{#2}%
7009       \fi
7010     \else
7011       \begingroup
7012       \let\Hy@next\endgroup
7013       \let\HyPL@found\@undefined
7014       \def\arabic{\HyPL@Format{arabic}}%
7015       \def\Roman{\HyPL@Format{Roman}}%
7016       \def\roman{\HyPL@Format{roman}}%
7017       \def\Alph{\HyPL@Format{Alph}}%
7018       \def\alph{\HyPL@Format{alph}}%
7019       \protected@edef\Hy@temp{#1}%
7020       \ifx\HyPL@found\relax
7021         \toks@{\expandafter{\Hy@temp}}%
7022         \edef\Hy@next{\endgroup
7023           \noexpand\HyPL@@@CheckThePage\the\toks@
7024           \noexpand\HyPL@found\relax\noexpand\@nil
7025         }%
7026       \fi
7027       \Hy@next
7028     \fi
7029   }%

```

`\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`.

```

7030 \def\HyPL@Format#1#2{%
7031   \ifx\HyPL@found\@undefined
7032     \expandafter\ifx\csname c@#2\endcsname\c@page
7033     \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
7034   \else
7035     \expandafter\noexpand\csname#1\endcsname{#2}%
7036   \fi
7037   \else
7038     \expandafter\noexpand\csname#1\endcsname{#2}%
7039   \fi
7040 }%

```

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

```

7041 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
7042   \def\Hy@tempa{#3}%
7043   \def\Hy@tempb{\HyPL@found\relax}%
7044   \ifx\Hy@tempa\Hy@tempb

```

```

7045 \def\HyPL@Type{#2}%
7046 \def\HyPL@Prefix{#1}%
7047 \fi
7048 }%

```

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

```

7049 \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`.

```

7050 \def\HyPL@Useless{0<</S/D>>}%
7051 \@onelevel@sanitize\HyPL@Useless

```

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

```

7052 \def\HyPL@SetPageLabels{%
7053 \@onelevel@sanitize\HyPL@Labels
7054 \ifx\HyPL@Labels\@empty
7055 \else
7056 \ifx\HyPL@Labels\HyPL@Useless
7057 \else
7058 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
7059 \fi
7060 \fi
7061 }%

```

```

7062 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
7063 \fi

```

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

```

7064 \Hy@DisableOption{pdfpagelabels}
7065 \</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`

```

7066 \<pdfTeX>
7067 \pdf@ifdraftmode{%
7068 \let\Hy@PutCatalog\ltx@gobble
7069 }{%
7070 \let\Hy@PutCatalog\pdfcatalog
7071 }
7072 \</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.

```

7073 \<vTeX>
7074 \providecommand*\XR@ext{pdf}
7075 \edef\Hy@VTeXversion{%
7076 \ifx\VTeXversion\@undefined

```

```

7077 \z@
7078 \else
7079 \ifx\VTexversion\relax
7080 \z@
7081 \else
7082 \VTexversion
7083 \fi
7084 \fi
7085 }
7086 \begingroup
7087 \ifnum\Hy@VTexversion<660 %
7088 \gdef\Hy@PutCatalog#1{%
7089 \Hy@WarningNoLine{%
7090 VTeX 6.59g or above required for pdfpagelabels%
7091 }%
7092 }%
7093 \else
7094 \gdef\Hy@PutCatalog#1{%
7095 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7096 }%
7097 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7098 \ifx\#2\%
7099 \else
7100 \immediate\special{!pdfpagelabels #2}%
7101 \fi
7102 }%
7103 \fi
7104 \endgroup
7105 </vtex>

7106 <*pdftex | vtex>

```

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

```

7107 \ifHy@pdfpagelabels
7108 \def\HyPL@StorePageLabel#1{%
7109 \toks@ \expandafter{\HyPL@Labels}%
7110 \xdef\HyPL@Labels{%
7111 \the\toks@
7112 \the\Hy@abspage<<#1>>%
7113 }%
7114 }%

```

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.

```

7115 \RequirePackage{atveryend}[2009/12/07]%
7116 \AtVeryEndDocument{%
7117 \HyPL@SetPageLabels
7118 }%
7119 \fi
7120 </pdftex | vtex>

```

28.1.2 xetex

```

7121 <*xetex>
7122 \HyPsd@LoadUnicode
7123 \Hy@unicodetrue

```

```

7124 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7125 \else
7126 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7127 \fi
7128 \HyPsd@LoadStringEnc
7129 \define@key{Hyp}{unicode}[true]{%
7130 \Hy@boolkey{unicode}{#1}%
7131 \ifHy@unicode
7132 \else
7133 \Hy@Warning{%
7134 XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
7135 option setting `unicode=false'%
7136 }%
7137 \Hy@unicodetrue
7138 \fi
7139 }
7140 \define@key{Hyp}{pdfencoding}{%
7141 \edef\HyPsd@temp{#1}%
7142 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7143 \let\HyPsd@pdfencoding\HyPsd@temp
7144 \else
7145 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7146 \let\HyPsd@pdfencoding\HyPsd@temp
7147 \else
7148 \Hy@Warning{%
7149 XeTeX driver only supports\MessageBreak
7150 `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
7151 setting `pdfencoding=\HyPsd@temp'%
7152 }%
7153 \fi
7154 \fi
7155 }
7156 \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:

```

7157 \def\setpdfinkmargin#1{%
7158 \begingroup
7159 \setlength{\dimen@}{#1}%
7160 \special{dvipdfmx:config g \strip@pt\dimen@}%
7161 \endgroup}
7162 \</xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

7163 \<pdfmarkbase>
7164 \begingroup
7165 \@ifundefined{headerps@out}{}{%
7166 \toks@\expandafter{\Hy@FirstPageHook}%
7167 \xdef\Hy@FirstPageHook{%
7168 \noexpand\headerps@out{%
7169 systemdict /pdfmark known%
7170 {%
7171 userdict /?pdfmark systemdict /exec get put%
7172 }{%
7173 userdict /?pdfmark systemdict /pop get put %
7174 userdict /pdfmark systemdict /cleartomark get put%
7175 }%
7176 ifelse%

```

```

7177 }%
7178 \the\toks@
7179 }%
7180 }%
7181 \endgroup
7182 \pdfmarkbase

```

\Hy@PutCatalog

```

7183 \dvi\pdfm | xetex\def\Hy@PutCatalog#1{\pdfmark{docview <<#1>>}}
7184 \*pdfmarkbase
7185 \def\Hy@PutCatalog#1{%
7186 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7187 }
7188 \pdfmarkbase

7189 \*pdfmarkbase | dvi\pdfm | xetex
7190 \ifHy@pdfpagelabels

```

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

```

7191 \def\HyPL@StorePageLabel#1{%
7192 \if@files
7193 \begin{group}
7194 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7195 \immediate\write\@mainaux{%
7196 \string\HyPL@Entry{\Hy@tempa}%
7197 }%
7198 \end{group}
7199 \fi
7200 }%

```

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.

```

7201 \Hy@AtBeginDocument{%
7202 \if@files
7203 \immediate\write\@mainaux{%
7204 \string\providecommand\string*\string\HyPL@Entry[1]{}%
7205 }%
7206 \fi
7207 \ifx\HyPL@Labels\@empty
7208 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7209 \else
7210 \HyPL@SetPageLabels
7211 \fi
7212 \let\HyPL@Entry\@gobble
7213 }%

```

\HyPL@Entry

```

7214 \def\HyPL@Entry#1{%
7215 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7216 \HyPL@Labels
7217 #1%
7218 }%
7219 }%

7220 \fi
7221 \pdfmarkbase | dvi\pdfm | xetex

```

```

7222 \package
7223 \ifx\MaybeStopEarly\relax
7224 \else
7225 \Hy@stoppedearlytrue
7226 \expandafter\MaybeStopEarly
7227 \fi
7228 \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

```

7229 \def\Hy@CounterExists#1{%
7230 \begingroup\expandafter\expandafter\expandafter\endgroup
7231 \expandafter\ifx\csname c@#1\endcsname\relax
7232 \expandafter\@gobble
7233 \else
7234 \begingroup\expandafter\expandafter\expandafter\endgroup
7235 \expandafter\ifx\csname the#1\endcsname\relax
7236 \expandafter\expandafter\expandafter\@gobble
7237 \else
7238 \expandafter\expandafter\expandafter\@firstofone
7239 \fi
7240 \fi
7241 }
7242 \Hy@CounterExists{section}{%
7243 \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7244 }
7245 \Hy@CounterExists{part}{%
7246 \providecommand\theHpart{\arabic{part}}}%
7247 }
7248 \ltx@ifundefined{thechapter}{%
7249 \providecommand\theHsection {\arabic{section}}}%
7250 \providecommand\theHfigure {\arabic{figure}}}%
7251 \providecommand\theHtable {\arabic{table}}}%
7252 }{%
7253 \providecommand\theHchapter {\arabic{chapter}}}%
7254 \providecommand\theHfigure {\theHchapter.\arabic{figure}}}%

```

```

7255 \providecommand\theHtable    {\theHchapter.\arabic{table}}%
7256 \providecommand\theHsection  {\theHchapter.\arabic{section}}%
7257 }
7258 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
7259 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7260 \providecommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
7261 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7262 \providecommand\theHtheorem    {\theHsection.\arabic{theorem}}
7263 \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.

```

7264 \let\H@item\item
7265 \newcounter{Item}
7266 \def\theHItem{\arabic{Item}}
7267 \def\item{%
7268   \@hyper@itemfalse
7269   \if@nmbrlist\@hyper@itemtrue\fi
7270   \H@item
7271 }
7272 \providecommand\theHenumi    {\theHItem}
7273 \providecommand\theHenumii   {\theHItem}
7274 \providecommand\theHenumiii  {\theHItem}
7275 \providecommand\theHenumiv   {\theHItem}
7276 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7277 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7278 \@ifundefined{theHHmpfootnote}{%
7279   \let\theHHmpfootnote\theHHfootnote
7280 }{}

```

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.

```

7281 \let\H@refstepcounter\refstepcounter
7282 \edef\name@of@eq{equation}%
7283 \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.

```

7284 \newif\if@hyper@item
7285 \newif\if@skiphyperref
7286 \@hyper@itemfalse
7287 \@skiphyperreffalse
7288 \def\refstepcounter#1{%
7289   \ifHy@pdfstring
7290   \else
7291     \H@refstepcounter{#1}%
7292     \edef\This@name{#1}%
7293     \ifx\This@name\name@of@slide
7294       \else
7295         \if@skiphyperref
7296         \else
7297           \if@hyper@item
7298             \stepcounter{Item}%
7299             \hyper@refstepcounter{Item}%
7300           \@hyper@itemfalse

```

```

7301     \else
7302     \hyper@refstepcounter{#1}%
7303     \fi
7304     \fi
7305     \fi
7306     \fi
7307 }
7308 \let\Hy@saved@refstepcounter\refstepcounter

```

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

```

7309 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7310 \def\hyper@refstepcounter#1{%
7311   \edef\This@name{#1}%
7312   \ifx\This@name\name@of@eq
7313     \@ifundefined{theHequation}{%
7314       \make@stripped@name{\theequation}%
7315       \let\theHequation\newname
7316     }{}%
7317   \fi
7318   \HyCnt@ProvideTheHCounter{#1}%
7319   \hyper@makecurrent{#1}%
7320   \ifmeasuring@
7321   \else
7322     \Hy@raisedlink{%
7323       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7324     }%
7325   \fi
7326 }

```

`\Hy@ProvideTheHCounter`

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

```

7327 \def\HyCnt@ProvideTheHCounter#1{%
7328   \@ifundefined{theH#1}{%
7329     \expandafter\def\csname theH#1\endcsname{}%
7330     \def\Hy@temp{\@elt{#1}}%
7331     \ltx@onelevel@sanitize\Hy@temp
7332     \let\HyOrg@elt\@elt
7333     \edef\@elt{%
7334       \noexpand\HyCnt@LookForParentCounter
7335       \expandafter\noexpand\csname theH#1\endcsname
7336     }%
7337     \cl@@ckpt
7338     \let\@elt\HyOrg@elt
7339     \expandafter
7340     \ltx@LocalAppendToMacro\csname theH#1\endcsname\expandafter\endcsname
7341     \expandafter{%
7342       \expandafter\@arabic\csname c@#1\endcsname
7343     }%

```



```

7344 }{}%
7345 }

```

\Hy@LookForParentCounter

```

7346 \def\HyCnt@LookForParentCounter#1#2{%
7347   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7348   \ltx@ifundefined{cl@#2}{%
7349     }{%
7350     \ltx@onelevel@sanitize\Hy@temp@A
7351     \edef\Hy@temp@A{%
7352       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7353     }\Hy@temp@A
7354     \ifn@
7355       \ltx@ifundefined{theH#2}{%
7356         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7357         \expandafter{%
7358           \expandafter\@arabic\csname c@#2\endcsname.%
7359         }%
7360       }{%
7361         \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7362         \expandafter{%
7363           \csname theH#2\endcsname.%
7364         }%
7365       }%
7366     \fi
7367   }%
7368 }

```

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.

```

7369 \begingroup\expandafter\expandafter\expandafter\endgroup
7370 \expandafter\ifx\csname chapter\endcsname\relax
7371   \def\Hy@chapterstring{section}%
7372 \else
7373   \def\Hy@chapterstring{chapter}%
7374 \fi
7375 \def\Hy@appendixstring{appendix}
7376 \def\Hy@chapapp{\Hy@chapterstring}
7377 \ltx@ifundefined{appendix}{%
7378 }{%
7379   \let\HyOrg@appendix\appendix
7380   \def\Hy@AlphNoErr#1{%
7381     \ifnum\value{#1}>26 %
7382       Alph\number\value{#1}%
7383     \else
7384       \ifnum\value{#1}<1 %
7385         Alph\number\value{#1}%
7386       \else
7387         \Alph{#1}%
7388       \fi
7389     \fi
7390   }%
7391   \def\appendix{%

```

```

7392 \ltx@ifundefined{chapter}{%
7393   \gdef\theHsection{\Hy@AlphNoErr{section}}%
7394 }{%
7395   \gdef\theHchapter{\Hy@AlphNoErr{chapter}}%
7396 }%
7397 \xdef\Hy@chapapp{\Hy@appendixstring}%
7398 \HyOrg@appendix
7399 }%
7400 }

```

\Hy@Test@alph

```

7401 \def\Hy@Test@alph#1{%
7402   \ifcase#1\or
7403     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7404     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7405     u\or v\or w\or x\or y\or z%
7406   \else
7407     \@ctrerr
7408   \fi
7409 }

```

\Hy@Test@Alph

```

7410 \def\Hy@Test@Alph#1{%
7411   \ifcase#1\or
7412     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7413     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7414     U\or V\or W\or X\or Y\or Z%
7415   \else
7416     \@ctrerr
7417   \fi
7418 }

```

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

```

7419 \def\hyper@makecurrent#1{%
7420   \begingroup
7421   \Hy@safe@activestru
7422   \edef\Hy@param{#1}%
7423   \ifx\Hy@param\Hy@chapterstring
7424     \let\Hy@param\Hy@chapapp
7425   \fi
7426   \ifHy@hypertextnames
7427     \let\@number\@firstofone
7428     \def\@fnsymbol##1{fnsymbol\number##1}%
7429     \def\@arabic##1{\number##1}%
7430     \ifx\@alph\Hy@Test@alph
7431     \else
7432       \def\@alph{alph\number}%
7433     \fi
7434     \ifx\@Alph\Hy@Test@Alph
7435     \else
7436       \def\@Alph{Alph\number}%
7437     \fi
7438     \ifHy@naturalnames
7439       \let\textlatin\@firstofone
7440       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7441     \else

```

```

7442 \xdef\HyperGlobalCurrentHref{%
7443 \csname
7444 the%
7445 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7446 #1%
7447 \endcsname
7448 }%
7449 \fi
7450 \xdef\HyperGlobalCurrentHref{%
7451 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7452 }%
7453 \else
7454 \Hy@GlobalStepCount\Hy@linkcounter
7455 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7456 \fi
7457 \endgroup
7458 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7459 \ifHy@localanchorname
7460 \let\@currentHref\HyperLocalCurrentHref
7461 \else
7462 \global\let\@currentHref\HyperGlobalCurrentHref
7463 \fi
7464 }

```

\Hy@MakeCurrentHref

```

7465 \def\Hy@MakeCurrentHref#1{%
7466 \edef\HyperLocalCurrentHref{#1}%
7467 \@onelevel@sanitize\HyperLocalCurrentHref
7468 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7469 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7470 \ifHy@localanchorname
7471 \let\@currentHref\HyperLocalCurrentHref
7472 \else
7473 \global\let\@currentHref\HyperGlobalCurrentHref
7474 \fi
7475 }

```

\Hy@MakeCurrentHrefAuto

```

7476 \def\Hy@MakeCurrentHrefAuto#1{%
7477 \Hy@GlobalStepCount\Hy@linkcounter
7478 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7479 }

```

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

```

7480 \def\@currentHlabel{\@currentHref}

7481 \@ifpackageloaded{fancyvrb}{%
7482 \@ifpackagelater{fancyvrb}{1998/05/20}{-}{-}%
7483 \def\FV@StepLineNo{%
7484 \FV@SetLineNo
7485 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7486 \FV@StepLineNo
7487 }%
7488 }%
7489 {}

```

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`

```

7490 \Hy@AtBeginDocument{%
7491   \ifclassloaded{revtex4}{%
7492     \@namedef{ver@lastpage.sty}{1994/06/25}%
7493   }{}%
7494   \@ifpackageloaded{lastpage}{%
7495     \ifHy@pageanchor
7496     \else
7497       \Hy@WarningNoLine{%
7498         The \string\pageref{LastPage} link doesn't work\MessageBreak
7499         with disabled option `pageanchor'%
7500       }%
7501     \fi
7502     \def\lastpage@putlabel{%
7503       \addtocounter{page}{-1}%
7504       \if@filesw
7505         \begingroup
7506           \let\@number\@firstofone
7507           \ifHy@pageanchor
7508             \ifHy@hypertextnames
7509               \ifHy@plainpages
7510                 \def\Hy@temp{\arabic{page}}%
7511               \else
7512                 \Hy@unicodedefalse
7513                 \pdfstringdef\Hy@temp{\thepage}%
7514               \fi
7515             \else
7516               \def\Hy@temp{\the\Hy@pagecounter}%
7517             \fi
7518           \fi
7519           \immediate\write\@auxout{%
7520             \string\newlabel
7521             {LastPage}{{}{\thepage}}{}%
7522             \ifHy@pageanchor page.\Hy@temp\fi}{}%
7523           }%
7524         \endgroup
7525       \fi
7526       \addtocounter{page}{1}%
7527     }%
7528     \@ifclassloaded{revtex4}{%
7529       \begingroup
7530         \toks@\expandafter{\lastpage@putlabel}%
7531         \edef\x{\endgroup
7532           \def\noexpand\lastpage@putlabel{%
7533             \noexpand\stepcounter{page}%
7534             \the\toks@
7535             \noexpand\addtocounter{page}\noexpand\m@ne

```

```

7536     }%
7537     }%
7538     \x
7539     }{}%
7540     }{}%
7541 }
7542 \</package>
7543 \<*check>
7544 \checkpackage{lastpage}[1994/06/25]
7545 \checkcommand\def\lastpage@putlabel{%
7546   \addtocounter{page}{-1}%
7547   \immediate\write\@auxout{%
7548     \string\newlabel{LastPage}{\thepage}}%
7549   }%
7550   \addtocounter{page}{1}%
7551 }
7552 \</check>
7553 \<*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.

```

7554 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
7555 \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:

```

7556 \@ifpackageloaded{titlesec}{%
7557   \def\ttl@Hy@steplink#1{%
7558     \Hy@MakeCurrentHrefAuto{#1*}%
7559     \edef\ttl@Hy@saveanchor{%
7560       \noexpand\Hy@raisedlink{%
7561         \noexpand\hyper@anchorstart{\@currentHref}%
7562         \noexpand\hyper@anchorend
7563       \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7564       \noexpand\ttl@Hy@PatchSaveWrite
7565     }%
7566   }%
7567 }%
7568 \def\ttl@Hy@PatchSaveWrite{%
7569   \begingroup
7570   \toks@\expandafter{\ttl@savewrite}%
7571   \edef\x{\endgroup
7572     \def\noexpand\ttl@savewrite{%
7573       \let\noexpand\@currentHref
7574       \noexpand\ttl@Hy@SavedCurrentHref
7575     \the\toks@
7576   }%
7577 }%
7578   \x
7579 }%

```

```

7580 \def\ttl@Hy@refstepcounter#1{%
7581   \let\ttl@b\Hy@raisedlink
7582   \def\Hy@raisedlink##1{%
7583     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7584   }%
7585   \refstepcounter{#1}%
7586   \let\Hy@raisedlink\ttl@b
7587 }%
7588 }{}

Package titletoc support:
7589 \@ifpackageloaded{titletoc}{%
7590   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7591 }{}

```

33 Package varioref support

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

```

7592 \AtBeginDocument{%
7593   \def\Hy@varioref@undefined{???}{??}{-}{-}}
7594 \@ifpackageloaded{varioref}{%
7595   \def\vref@pagenum#1#2{%
7596     \@ifundefined{r@#2}{%
7597       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7598     }{}%
7599     \edef#1{\getpagerefnumber{#2}}%
7600   }%
7601 }{}

```

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

```

7602 \def\Hy@varioref@refstepcounter#1{%
7603   \stepcounter{#1}%
7604   \protected@edef\@currentlabel{%
7605     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7606   }%
7607 }
7608 \ifx\refstepcounter\Hy@varioref@refstepcounter
7609   \let\H@refstepcounter\refstepcounter
7610   \let\refstepcounter\Hy@saved@refstepcounter
7611 \fi
7612 }

```

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

```

7613 \@ifpackageloaded{longtable}{%
7614   \begingroup
7615   \def\y{\LT@array}%
7616   \@ifundefined{scr@LT@array}{%

```

```

7617 \@@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7618 }\def\y{\scr@LT@array}}%
7619 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7620 \expandafter\endgroup
7621 \expandafter\def\y[##1]##2{%
7622 \H@refstepcounter{#1}%
7623 \hyper@makecurrent{table}%
7624 \let\Hy@LT@currentHref\@currentHref
7625 #2\@sharp###4%
7626 }%
7627 }%
7628 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
Patch of \LT@start: add anchor before first line after \vskip\LTpre
7629 \begingroup
7630 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7631 \endgroup
7632 \def\LT@start{%
7633 #1%
7634 \ifvoid\LT@foot#2\fi
7635 \let\@currentHref\Hy@LT@currentHref
7636 \Hy@raisedlink{%
7637 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7638 }%
7639 #3%
7640 }%
7641 }%
7642 \expandafter\x\LT@start\@nil
7643 }{}

```

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.

```

7644 \let\new@refstepcounter\refstepcounter
7645 \let\H@equation\equation
7646 \let\H@endequation\endequation
7647 \@ifpackageloaded{amsmath}{%
7648 \long\def\Hy@temp{%
7649 \incr@eqnum
7650 \mathdisplay@push
7651 \st@rredfalse \global\@eqnswtrue
7652 \mathdisplay{equation}%
7653 }%
7654 \ifx\Hy@temp\equation
7655 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7656 \csname iftrue\endcsname
7657 \else
7658 \long\def\equation{%
7659 \mathdisplay@push
7660 \st@rredfalse \global\@eqnswtrue
7661 \mathdisplay{equation}%
7662 \incr@eqnum

```

```

7663 }%
7664 \fi
7665 \fi
7666 }{%
7667 \def\equation{%
7668 \let\refstepcounter\H@refstepcounter
7669 \H@equation
7670 \@ifundefined{theHequation}{%
7671 \make@stripped@name{\theequation}%
7672 \let\theHequation\newname
7673 }{}%
7674 \hyper@makecurrent{equation}%

```

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

```

7675 \mathopen{%
7676 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
7677 }%
7678 \let\refstepcounter\new@refstepcounter
7679 }%
7680 \def\endequation{%
7681 \ifx\Hy@raisedlink\ltx@empty
7682 \hyper@anchorend
7683 \else
7684 \mathclose{\Hy@raisedlink{\hyper@anchorend}}}%
7685 \fi
7686 \H@endequation
7687 }%
7688 }

```

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.

```

7689 \newif\if@eqnstar
7690 \@eqnstarfalse
7691 \let\H@eqnarray\eqnarray
7692 \let\H@endeqnarray\endeqnarray
7693 \def\eqnarray{%
7694 \let\Hy@reserved@a\relax
7695 \def\@currentHref{}%
7696 \H@eqnarray
7697 \if@eqnstar
7698 \else
7699 \ifx\\\@currentHref\\%
7700 \else
7701 \@ifundefined{theHequation}{%
7702 \make@stripped@name{\theequation}%
7703 \let\theHequation\newname
7704 }{}%
7705 \hyper@makecurrent{equation}%
7706 \mathopen{%
7707 \Hy@raisedlink{%
7708 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7709 }%
7710 }%
7711 \fi
7712 \fi

```



```

7713 }
7714 \def\endeqnarray{%
7715   \H@endeqnarray
7716 }

```

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.

```

7717 \@namedef{eqnarray*}{%
7718   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7719 }
7720 \@namedef{endeqnarray*}{%
7721   \nonumber\endeqnarray\@eqnstarfalse
7722 }

```

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

```

7723 \ltx@ifundefined{subeqnarray}{}{%
7724   \let\H@subeqnarray\subeqnarray
7725   \let\H@endsubeqnarray\endsubeqnarray
7726   \def\subeqnarray{%
7727     \let\Hy@reserved@a\relax
7728     \H@subeqnarray
7729     \@ifundefined{theHequation}{%
7730       \make@stripped@name{\theequation}%
7731       \let\theHequation\newname
7732     }{}%
7733     \hyper@makecurrent{equation}%
7734     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
7735   }%
7736   \def\endsubeqnarray{%
7737     \H@endsubeqnarray
7738   }%
7739   \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7740 }

```

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

```

7741 \def\make@stripped@name#1{%
7742   \begingroup
7743     \escapechar\m@ne
7744     \global\let\newname\@empty
7745     \protected@edef\Hy@tempa{#1}%
7746     \edef\@tempb{%
7747       \noexpand\@tfor\noexpand\Hy@tempa:=%
7748       \expandafter\strip@prefix\meaning\Hy@tempa
7749     }%
7750     \@tempb\do{%
7751       \if{\Hy@tempa\else
7752       \if{\Hy@tempa\else
7753         \xdef\newname{\newname\Hy@tempa}%
7754       \fi
7755     \fi
7756   }%
7757   \endgroup
7758 }

```

Support for amsmath's subequations:

```

7759 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

7760 \expandafter\ifx\csname subequations\endcsname\relax
7761 \else
7762 \let\HyOrg@subequations\subequations
7763 \def\subequations{%
7764 \stepcounter{equation}%
7765 \protected@edef\theHparentequation{%
7766 \ifundefined{theHequation}\theequation\theHequation
7767 }%
7768 \addtocounter{equation}{-1}%
7769 \HyOrg@subequations
7770 \def\theHequation{\theHparentequation\alph{equation}}%
7771 \ignorespaces
7772 }%
7773 \fi

```

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

```

7774 \Hy@AtBeginDocument{%
7775 \@ifpackageloaded{cleveref}{%
7776 \let\Hy@savedthm\@thm
7777 \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7778 }{%
7779 \@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

7780 \def\Hy@temp#1#2#3{%
7781 \ifhmode\unskip\unskip\par\fi
7782 \normalfont
7783 \trivlist
7784 \let\thmheadnl\relax
7785 \let\thm@swap\@gobble
7786 \let\thm@indent\indent % indent
7787 \thm@headfont{\scshape}% heading font small caps
7788 \thm@notefont{\fontseries\mddefault\upshape}%
7789 \thm@headpunct{.}% add period after heading
7790 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7791 \thm@space@setup
7792 #1% style overrides
7793 \@topsep \thm@preskip % used by thm head
7794 \@topsepadd \thm@postskip % used by \@endparenv
7795 \def\@tempa{#2}\ifx\@empty\@tempa
7796 \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
7797 \else
7798 \refstepcounter{#2}%
7799 \def\@tempa{%
7800 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7801 }%
7802 \fi
7803 \@tempa
7804 }%
7805 \ifx\Hy@temp\@thm
7806 \def\@thm#1#2#3{%
7807 \ifhmode
7808 \unskip\unskip\par
7809 \fi

```

```

7810 \normalfont
7811 \trivlist
7812 \let\thmheadnl\relax
7813 \let\thm@swap\@gobble
7814 \let\thm@indent\indent % indent
7815 \thm@headfont{\scshape}% heading font small caps
7816 \thm@notefont{\fontseries\mddefault\upshape}%
7817 \thm@headpunct{.}% add period after heading
7818 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7819 \thm@space@setup
7820 #1% style overrides
7821 \@topsep \thm@preskip % used by thm head
7822 \@topsepadd \thm@postskip % used by \@endparenv
7823 \def\dth@counter{#2}%
7824 \ifx\@empty\dth@counter
7825 \def\@tempa{%
7826 \@oparg{\@begintheorem{#3}{}}[]%
7827 }%
7828 \else
7829 \H@refstepcounter{#2}%
7830 \hyper@makecurrent{#2}%
7831 \let\Hy@dth@currentHref\@currentHref
7832 \def\@tempa{%
7833 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7834 }%
7835 \fi
7836 \@tempa
7837 }%
7838 \else
7839 \def\@thm#1#2#3{%
7840 \iffhmode
7841 \unskip\unskip\par
7842 \fi
7843 \normalfont
7844 \trivlist
7845 \let\thmheadnl\relax
7846 \let\thm@swap\@gobble
7847 \thm@notefont{\fontseries\mddefault\upshape}%
7848 \thm@headpunct{.}% add period after heading
7849 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7850 \thm@space@setup
7851 #1% style overrides
7852 \@topsep \thm@preskip % used by thm head
7853 \@topsepadd \thm@postskip % used by \@endparenv
7854 \def\dth@counter{#2}%
7855 \ifx\@empty\dth@counter
7856 \def\@tempa{%
7857 \@oparg{\@begintheorem{#3}{}}[]%
7858 }%
7859 \else
7860 \H@refstepcounter{#2}%
7861 \hyper@makecurrent{#2}%
7862 \let\Hy@dth@currentHref\@currentHref
7863 \def\@tempa{%
7864 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7865 }%
7866 \fi

```

```

7867 \tempa
7868 }%
7869 \fi
7870 \dth@everypar={%
7871 \@minipagefalse
7872 \global\@newlistfalse
7873 \@noparitemfalse
7874 \if@inlabel
7875 \global\@inlabelfalse
7876 \begingroup
7877 \setbox\z@\lastbox
7878 \ifvoid\z@
7879 \kern-\itemindent
7880 \fi
7881 \endgroup
7882 \ifx\@empty\dth@counter
7883 \else
7884 \Hy@raisedlink{%
7885 \hyper@anchorstart{%
7886 \ltx@ifundefined{Hy@dth@currentHref}%
7887 \@currentHref\Hy@dth@currentHref
7888 }\hyper@anchorend
7889 }%
7890 \fi
7891 \unhbox\@labels
7892 \fi
7893 \if@nobreak
7894 \@nobreakfalse \clubpenalty\@M
7895 \else
7896 \clubpenalty\@clubpenalty \everypar{}%
7897 \fi
7898 }%
7899 }%

```

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

```

7900 {%
7901 \let\Hy@savethm\@thm
7902 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7903 }%
7904 }%
7905 }

```

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.

```

7906 \ifHy@hyperfootnotes
7907 \newcounter{Hfootnote}%
7908 \let\H@@footnotetext\@footnotetext
7909 \let\H@@footnotemark\@footnotemark
7910 \def\@xfootnotenext[#1]{%
7911 \begingroup
7912 \csname c@\@mpfn\endcsname #1\relax

```

```

7913 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7914 \endgroup
7915 \ifx\@footnotetext\@mpfootnotetext
7916 \expandafter\H@@mpfootnotetext
7917 \else
7918 \expandafter\H@@footnotetext
7919 \fi
7920 }%
7921 \def\@xfootnotemark[#1]{%
7922 \begingroup
7923 \c@footnote #1\relax
7924 \unrestored@protected@xdef\@thefnmark{\thefnmark}%
7925 \endgroup
7926 \H@@footnotemark
7927 }%
7928 \let\H@@mpfootnotetext\@mpfootnotetext
7929 \long\def\@mpfootnotetext#1{%
7930 \H@@mpfootnotetext{%
7931 \ifHy@nesting
7932 \expandafter\ltx@firstoftwo
7933 \else
7934 \expandafter\ltx@secondoftwo
7935 \fi
7936 {%
7937 \expandafter\hyper@@anchor\expandafter{%
7938 \Hy@footnote@currentHref
7939 }{\ignorespaces #1}%
7940 }{%
7941 \Hy@raisedlink{%
7942 \expandafter\hyper@@anchor\expandafter{%
7943 \Hy@footnote@currentHref
7944 }{\relax}%
7945 }\ignorespaces #1%
7946 }%
7947 }%
7948 }%
7949 \long\def\@footnotetext#1{%
7950 \H@@footnotetext{%
7951 \ifHy@nesting
7952 \expandafter\ltx@firstoftwo
7953 \else
7954 \expandafter\ltx@secondoftwo
7955 \fi
7956 {%
7957 \expandafter\hyper@@anchor\expandafter{%
7958 \Hy@footnote@currentHref
7959 }{\ignorespaces #1}%
7960 }{%
7961 \Hy@raisedlink{%
7962 \expandafter\hyper@@anchor\expandafter{%
7963 \Hy@footnote@currentHref
7964 }{\relax}%
7965 }%
7966 \let\@currentHref\Hy@footnote@currentHref
7967 \let\@currentlabelname\@empty
7968 \ignorespaces #1%
7969 }%

```

```

7970 }%
7971 }%

```

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.

```

7972 \def\@footnotemark{%
7973   \leavevmode
7974   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7975   \stepcounter{Hfootnote}%
7976   \global\let\Hy@saved@currentHref\@currentHref
7977   \hyper@makecurrent{Hfootnote}%
7978   \global\let\Hy@footnote@currentHref\@currentHref
7979   \global\let\@currentHref\Hy@saved@currentHref
7980   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7981   \@makefnmark
7982   \hyper@linkend
7983   \ifhmode\spacefactor\@x@sf\fi
7984   \relax
7985 }%

```

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

```

7986 \@ifpackageloaded{tabularx}{%
7987   \let\HyOrg@TX@endtabularx\TX@endtabularx
7988   \def\Hy@tabularx@hook{%
7989     \let\@footnotetext\H@@footnotetext
7990     \let\@footnotemark\H@@footnotemark
7991     \let\@mpfootnotetext\H@@mpfootnotetext
7992   }%
7993   \begingroup
7994     \toks@\expandafter{\TX@endtabularx}%
7995     \xdef\Hy@gtemp{%
7996       \noexpand\Hy@tabularx@hook
7997       \the\toks@
7998     }%
7999   \endgroup
8000   \let\TX@endtabularx\Hy@gtemp
8001 }-%

```

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

```

8002 \@ifpackageloaded{longtable}{%
8003   \CheckCommand*{\LT@p@ftntext}[1]{%
8004     \edef\@tempa{%
8005       \the\LT@p@ftn
8006       \noexpand\footnotetext[\the\c@footnote]%
8007     }%
8008     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
8009   }%
8010   \long\def\LT@p@ftntext#1{%
8011     \edef\@tempa{%
8012       \the\LT@p@ftn
8013     }%

```

```

8014      \noexpand\c@footnote=\the\c@footnote\relax
8015      \noexpand\protected@xdef\noexpand\@thefnmark{%
8016        \noexpand\thempfn
8017      }%
8018      \noexpand\Hy@LT@footnotetext{%
8019        \Hy@footnote@currentHref
8020      }%
8021    }%
8022    \global\LT@p@ftn\expandafter{%
8023      \@tempa{#1}%
8024    \endgroup
8025  }%
8026 }%
8027 \long\def\Hy@LT@footnotetext#1#2{%
8028   \H@@@footnotetext{%
8029     \ifHy@nesting
8030       \hyper@@@anchor{#1}{#2}%
8031     \else
8032       \Hy@raisedlink{%
8033         \hyper@@@anchor{#1}{\relax}%
8034       }%
8035       \def\@currentHref{#1}%
8036       \let\@currentlabelname\@empty
8037       #2%
8038     \fi
8039   }%
8040 }%
8041 }{}%

```

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

```

8042 \ifpackageloaded{fancyvrb}{%
8043   \def\V@@@footnotetext{%
8044     \insert\footins\bgroup
8045     \csname reset@font\endcsname
8046     \footnotesize
8047     \interlinepenalty\interfootnotelinepenalty
8048     \splittopskip\footnotesep
8049     \splitmaxdepth\dp\strutbox
8050     \floatingpenalty \@MM
8051     \hsize\columnwidth
8052     \@parboxrestore
8053     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
8054     \@makefntext{}%
8055     \rule{\z@}{\footnotesep}%
8056   \bgroup
8057   \aftergroup\V@@@footnotetext
8058   \Hy@raisedlink{%
8059     \expandafter\hyper@@@anchor\expandafter{%
8060       \Hy@footnote@currentHref
8061     }{\relax}%
8062   }%
8063   \let\@currentHref\Hy@footnote@currentHref
8064   \let\@currentlabelname\@empty
8065   \ignorespaces
8066 }%
8067 }{}%

```

KOMA-Script defines `\footref` that uses both `\ref` and `\@footnotemark` re-

sulting in two links, one of them wrong.

```

8068 \def\Hy@temp#1{%
8069 \begingroup
8070 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8071 \endgroup
8072 \@footnotemark
8073 }%
8074 \ifx\Hy@temp\footref
8075 \def\footref#1{%
8076 \begingroup
8077 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8078 \endgroup
8079 \H@@@footnotemark
8080 }%
8081 \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.

```

8082 \let\HyOrg@maketitle\maketitle
8083 \def\maketitle{%
8084 \let\Hy@saved@footnotemark\@footnotemark
8085 \let\Hy@saved@footnotetext\@footnotetext
8086 \let\@footnotemark\H@@@footnotemark
8087 \let\@footnotetext\H@@@footnotetext
8088 \@ifnextchar[\Hy@maketitle@optarg{% ]
8089 \HyOrg@maketitle
8090 \Hy@maketitle@end
8091 }%
8092 }%
8093 \def\Hy@maketitle@optarg[#1]{%
8094 \HyOrg@maketitle[#{#1}]%
8095 \Hy@maketitle@end
8096 }%
8097 \def\Hy@maketitle@end{%
8098 \ifx\@footnotemark\H@@@footnotemark
8099 \let\@footnotemark\Hy@saved@footnotemark
8100 \fi
8101 \ifx\@footnotetext\H@@@footnotetext
8102 \let\@footnotetext\Hy@saved@footnotetext
8103 \fi
8104 }%

```

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

```

8105 \def\realfootnote{%
8106 \@ifnextchar[\@xfootnote{%
8107 \stepcounter{\@mpfn}%
8108 \protected@xdef\@thefnmark{\thempfn}%
8109 \H@@@footnotemark\H@@@footnotetext
8110 }%
8111 }%
8112 \fi
8113 \Hy@DisableOption{hyperfootnotes}

8114 \</package>
8115 \< *check>
8116 \checklatex

```



```

8117 \checkcommand\def\@xfootnotenext[#1]{%
8118   \begingroup
8119     \csname c@\@mpfn\endcsname #1\relax
8120     \unrestored@protected@xdef\@thefnmark{\thempfn}%
8121   \endgroup
8122   \@footnotetext
8123 }
8124 \checkcommand\def\@xfootnotemark[#1]{%
8125   \begingroup
8126     \c@footnote #1\relax
8127     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
8128   \endgroup
8129   \@footnotemark
8130 }
8131 \checkcommand\def\@footnotemark{%
8132   \leavevmode
8133   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8134   \@makefnmark
8135   \ifhmode\spacefactor\@x@sf\fi
8136   \relax
8137 }
8138 \</check>
8139 \<*/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.

```

8140 \def\caption{%
8141   \ifx\@captive\@undefined
8142     \@latex@error{\noexpand\caption outside float}\@ehd
8143     \expandafter\@gobble
8144   \else
8145     \H@refstepcounter\@captive
8146     \let\Hy@tempa\@caption
8147     \@ifundefined{float@caption}{%
8148       }{%
8149         \expandafter\ifx\csname @float@c@\@captive\endcsname
8150           \float@caption
8151         \let\Hy@tempa\Hy@float@caption
8152       \fi
8153     }%
8154     \expandafter\@firstofone
8155     \fi
8156     {\@dblarg{\Hy@tempa\@captive}}%
8157 }
8158 \long\def\@caption#1[#2]#3{%
8159   \expandafter\ifx\csname if@capstart\expandafter\endcsname
8160     \csname iftrue\endcsname
8161     \global\let\@currentHref\hc@currentHref
8162   \else
8163     \hyper@makecurrent{\@captive}%
8164   \fi
8165   \@ifundefined{NR@gettitle}{%
8166     \def\@currentlabelname{#2}%
8167   }{%

```

```

8168 \NR@gettitle{#2}%
8169 }%
8170 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8171 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8172 }%
8173 \begingroup
8174 \@parboxrestore
8175 \if@minipage
8176 \@setminipage
8177 \fi
8178 \normalsize
8179 \expandafter\ifx\csname if@capstart\expandafter\endcsname
8180 \csname iftrue\endcsname
8181 \global\@capstartfalse
8182 \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8183 \else
8184 \makecaption{\csname fnum@#1\endcsname}{%
8185 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8186 \ifHy@nesting
8187 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
8188 \else
8189 \Hy@raisedlink{%
8190 \expandafter\hyper@@anchor\expandafter{%
8191 \@currentHref
8192 }{\relax}%
8193 }%
8194 #3%
8195 \fi
8196 }%
8197 \fi
8198 \par
8199 \endgroup
8200 }

```

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’.

```

8201 \let\Hy@float@caption\@caption
8202 \newcommand{\HyNew@float@makebox}[1]{%
8203 \HyOrg@float@makebox{%
8204 #1\relax
8205 \ifx\Hy@float@currentHref\@undefined
8206 \else
8207 \expandafter\hyper@@anchor\expandafter{%
8208 \Hy@float@currentHref
8209 }{\relax}%
8210 \global\let\Hy@float@currentHref\@undefined
8211 \fi
8212 }%
8213 }%
8214 \@ifpackageloaded{float}{%
8215 \def\Hy@float@caption{%
8216 \ifx\Hy@float@currentHref\@undefined
8217 \hyper@makecurrent{\@cuptype}%

```

```

8218 \global\let\Hy@float@currentHref\@currentHref
8219 \else
8220 \let\@currentHref\Hy@float@currentHref
8221 \fi
8222 \float@caption
8223 }%
8224 \let\HyOrg@float@makebox\float@makebox
8225 \let\float@makebox\HyNew@float@makebox
8226 }{}

8227 \endpackage
8228 \check
8229 \checklatex[1999/06/01 - 2000/06/01]
8230 \checkcommand\def\caption{%
8231 \ifx\@capttype\@undefined
8232 \@latex@error{\noexpand\caption outside float}\@ehd
8233 \expandafter\@gobble
8234 \else
8235 \refstepcounter\@capttype
8236 \expandafter\@firstofone
8237 \fi
8238 {\@dblarg{\@caption\@capttype}}}%
8239 }
8240 \checkcommand\long\def\@caption#1[#2]#3{%
8241 \par
8242 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8243 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
8244 }%
8245 \begingroup
8246 \@parboxrestore
8247 \if@minipage
8248 \@setminipage
8249 \fi
8250 \normalsize
8251 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8252 \endgroup
8253 }
8254 \endcheck
8255 \endpackage

```

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

```

8256 \def\hyper@natlinkstart#1{%
8257 \Hy@backout{#1}%
8258 \hyper@linkstart{cite}{cite.#1}%
8259 \def\hyper@nat@current{#1}%
8260 }
8261 \def\hyper@natlinkend{%

```

```

8262 \hyper@linkend
8263 }
8264 \def\hyper@natlinkbreak#1#2{%
8265 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8266 }
8267 \def\hyper@natanchorstart#1{%
8268 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8269 }
8270 \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.

```

8271 \ltx@ifundefined{NAT@parse}{%
8272 \providecommand*\@extra@binfo{}%
8273 \providecommand*\@extra@b@citeb{}%
8274 \def\bibcite#1#2{%
8275 \@newl@bel{b}{#1\@extra@binfo}{%
8276 \hyper@@link{cite}{cite.#1\@extra@b@citeb}{#2}%
8277 }%
8278 }%
8279 \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.”.

```

8280 \let\Hy@bibcite\bibcite
8281 \begingroup
8282 \@ifundefined{bbl@cite@choice}{}{%
8283 \g@addto@macro\bbl@cite@choice{%
8284 \let\bibcite\Hy@bibcite
8285 }%
8286 }%
8287 \endgroup

```

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

```

8288 \providecommand*\@BIBLABEL{\@biblabel}%
8289 \def\@bibitem[#1]#2{%
8290 \@skiphyperreftrue
8291 \H@item[%
8292 \ifx\Hy@raisedlink\@empty
8293 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8294 \@BIBLABEL{#1}%
8295 \hyper@anchorend
8296 \else
8297 \Hy@raisedlink{%
8298 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8299 }%
8300 \@BIBLABEL{#1}%
8301 \fi
8302 \hfill
8303 ]%
8304 \@skiphyperreffalse
8305 \if@filesw
8306 \begingroup
8307 \let\protect\noexpand
8308 \immediate\write\@auxout{%
8309 \string\bibcite{#2}{#1}%

```

```

8310 }%
8311 \endgroup
8312 \fi
8313 \ignorespaces
8314 }%

```

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

```

8315 \def\@bibitem#1{%
8316   \@skiphyperreftrue\H@item\@skiphyperreffalse
8317   \Hy@raisedlink{%
8318     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8319   }%
8320   \if@filesw
8321     \begingroup
8322     \let\protect\noexpand
8323     \immediate\write\@auxout{%
8324       \string\bibcite{#1}{\the\value{\@listctr}}}%
8325     }%
8326   \endgroup
8327   \fi
8328   \ignorespaces
8329 }%
8330 }{}

8331 \</package>
8332 \< *check>
8333 \checklatex
8334 \checkcommand\def\@lbibitem[#1]#2{%
8335   \item[\@biblabel{#1}]{\hfill}%
8336   \if@filesw
8337     {%
8338       \let\protect\noexpand
8339       \immediate\write\@auxout{%
8340         \string\bibcite{#2}{#1}%
8341       }%
8342     }%
8343   \fi
8344   \ignorespaces
8345 }
8346 \checkcommand\def\@bibitem#1{%
8347   \item
8348   \if@filesw
8349     \immediate\write\@auxout{%
8350       \string\bibcite{#1}{\the\value{\@listctr}}}%
8351     }%
8352   \fi
8353   \ignorespaces
8354 }
8355 \</check>
8356 \< *package>

```

RevTeX (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.

```

8357 \@ifclassloaded{revtex}{%
8358   \Hy@Info{*** compatibility with revtex **** }%
8359   \def\revtex@checking#1#2{%

```

```

8360 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8361 \expandafter\def\csname b@#1\endcsname{#2}%
8362 \@SetMaxRnhefLabel{#1}%
8363 \expandafter\let\csname b@#1\endcsname\T@temp
8364 }%

```

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

```

8365 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
8366 \providecommand*{\@extra@b@citeb}{}%
8367 \def\CITE[#1]#2{%
8368   \let\@citea\@empty
8369   \leavevmode
8370   \unskip
8371   $^{}%
8372   \scriptstyle
8373   \@CITE{%
8374     \@for\@citeb:=#2\do{%
8375       \@citea
8376       \def\@citea{,\penalty\@m\ }%
8377       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8378       \if@filesw
8379         \immediate\write\@auxout{\string\citation{\@citeb}}%
8380       \fi
8381       \@ifundefined{b@\@citeb\extra@b@citeb}{}%
8382       \mbox{\reset@font\bfseries ?}%
8383       \G@refundefinedtrue
8384       \@latex@warning{%
8385         Citation `'\@citeb' on page \thepage \space undefined%
8386       }%
8387     }%
8388     {\csname b@\@citeb\@extra@b@citeb\endcsname}%
8389   }%
8390 }%
8391 }{#1}%
8392 }$%
8393 }%

```

No, life is too short. I am not going to understand the Rev_{tex} \collapse macro, I shall just restore the original behaviour of \cite_x; sigh. This is SO vile.

```

8394 \def\citex[#1]#2{%
8395   \let\@citea\@empty
8396   \@cite{%
8397     \@for\@citeb:=#2\do{%
8398       \@citea
8399       \def\@citea{,\penalty\@m\ }%
8400       \edef\@citeb{\expandafter\@firstofone\@citeb}%
8401       \if@filesw
8402         \immediate\write\@auxout{\string\citation{\@citeb}}%
8403       \fi
8404       \@ifundefined{b@\@citeb\@extra@b@citeb}{}%
8405       \mbox{\reset@font\bfseries ?}%
8406       \G@refundefinedtrue
8407       \@latex@warning{%
8408         Citation `'\@citeb' on page \thepage \space undefined%
8409       }%
8410     }%
8411     \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%

```

```

8412     }%
8413     }%
8414     }{#1}%
8415 }%
8416 }{}

```

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.

```

8417 \ifpackageloaded{harvard}{%
8418   \Hy@AtBeginDocument{%
8419     \Hy@Info{*** compatibility with harvard **** }%
8420     \Hy@raiselinksfalse
8421     \def\harvardcite#1#2#3#4{%
8422       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{#1}{#2}}%
8423       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{#1}{#3}}%
8424       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{#1}{#4}}%
8425       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8426     }%
8427     \def\HAR@citetoaux#1{%
8428       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8429       \ifHy@backref
8430         \ifx\@empty\@currentlabel
8431           \else
8432             \@bsphack
8433             \if@filesw
8434               \protected@write\@auxout{}{%
8435                 \string\@writefile{brf}{%
8436                   \string\backcite{#1}{%
8437                     {\thepage}{\@currentlabel}{\@currentHref}%
8438                   }%
8439                 }%
8440               }%
8441             \fi
8442             \@esphack
8443           \fi
8444         \fi
8445       }%
8446       \def\harvarditem{%
8447         \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8448       }%
8449       \def\@harvarditem[#1]#2#3#4#5\par{%
8450         \item[]%
8451         \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8452         \if@filesw
8453           \begingroup
8454             \def\protect##1{\string ##1\space}%
8455             \ifthenelse{\equal{#1}{\null}}{%
8456               {\def\next{{#4}{#2}{#2}{#3}}}%
8457               {\def\next{{#4}{#2}{#1}{#3}}}%

```

```

8458     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8459     \endgroup
8460     \fi
8461     \protect\hspace*{-\labelwidth}%
8462     \protect\hspace*{-\labelsep}%
8463     \ignorespaces
8464     #5%
8465     \ifHy@backref
8466         \newblock
8467         \backref{\csname br@#4\endcsname}%
8468     \fi
8469     \par
8470 }%

```

\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:

```

8471 \long\def\HAR@checkcitations#1#2#3#4{%
8472   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8473   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8474     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8475     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8476       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8477       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8478         \else
8479           \@tempswatru
8480         \fi
8481       \else
8482         \@tempswatru
8483       \fi
8484     \else
8485       \@tempswatru
8486     \fi
8487   }%
8488 }%

8489 }{}

```

38.2 Package chicago

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

```

8490 \@ifpackageloaded{chicago}{%

```

\citeN

```

8491 \def\citeN{%
8492   \def\@citesep{-1000}%
8493   \def\@cite##1##2{##1}%
8494   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8495   \@citedata@opt
8496 }%

```

\shortciteN

```

8497 \def\shortciteN{%
8498   \def\@citesep{-1000}%
8499   \def\@cite##1##2{##1}%
8500   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%

```



```

8501 \citedata@opt
8502 }%

\citedata@opt
8503 \def\citedata@opt{%
8504 \let\cite@opt\@empty
8505 \@ifnextchar [{%
8506 \@tempwattrue
8507 \citedatax@opt
8508 }{%
8509 \@tempwafalse
8510 \citedatax[]%
8511 }%
8512 }%

\citedatax@opt
8513 \def\citedatax@opt[#1]{%
8514 \def\cite@opt{, #1}%
8515 \citedatax[{#1}]%
8516 }%

8517 }{}

```

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.

```

8518 \ltx@ifclassloaded{slides}{%
8519 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8520 \def\Hy@PageAnchorSlidesPlain{%
8521 \advance\c@page\ltx@one
8522 \edef\Hy@TempPageAnchor{%
8523 \noexpand\hyper@@anchor{%
8524 page.\the\c@slide.\the\c@overlay.\the\c@note%
8525 \ifnum\c@page=\ltx@one
8526 \else
8527 .\the\c@page
8528 \fi
8529 }%
8530 }%
8531 \advance\c@page-\ltx@one
8532 }%
8533 \def\Hy@PageAnchorSlide{%
8534 \advance\c@page\ltx@one
8535 \ifnum\c@page>\ltx@one
8536 \ltx@ifundefined{theHpage}{%
8537 \protected@edef\Hy@TheSlideOptionalPage{%
8538 \Hy@SlidesFormatOptionalPage{\theHpage}%
8539 }%
8540 }{%
8541 \protected@edef\Hy@TheSlideOptionalPage{%
8542 \Hy@SlidesFormatOptionalPage{\theHpage}%

```

```

8543     }%
8544     }%
8545     \else
8546     \def\Hy@TheSlideOptionalPage{}%
8547     \fi
8548     \advance\c@page-\ltx@one
8549     \pdfstringdef\@the@H@page{%
8550     \csname
8551     the%
8552     \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8553     \Hy@SlidesPage
8554     \endcsname
8555     \Hy@TheSlideOptionalPage
8556     }%
8557     \ltx@gobblethree
8558 }%
8559 \def\Hy@SlidesPage{slide}%
8560 \g@addto@macro\slide{%
8561 \def\Hy@SlidesPage{slide}%
8562 }%
8563 \g@addto@macro\overlay{%
8564 \def\Hy@SlidesPage{overlay}%
8565 }%
8566 \g@addto@macro\note{%
8567 \def\Hy@SlidesPage{note}%
8568 }%
8569 }{%
8570 \def\Hy@PageAnchorSlidesPlain{}%
8571 \def\Hy@PageAnchorSlide{}%
8572 }
8573 \def\Hy@EveryPageAnchor{%
8574 \Hy@DistillerDestFix
8575 \ifHy@pageanchor
8576 \ifHy@hypertextnames
8577 \ifHy@plainpages
8578 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8579 \Hy@PageAnchorSlidesPlain
8580 \else
8581 \begingroup
8582 \let\@number\@firstofone
8583 \Hy@unicodedefalse
8584 \Hy@PageAnchorSlide
8585 \pdfstringdef\@the@H@page{\the@H@page}%
8586 \endgroup
8587 \EdefUnescapeString\@the@H@page{\@the@H@page}%
8588 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8589 \fi
8590 \else
8591 \Hy@GlobalStepCount\Hy@pagecounter
8592 \def\Hy@TempPageAnchor{%
8593 \hyper@@anchor{page.\the\Hy@pagecounter}%
8594 }%
8595 \fi
8596 \vbox to 0pt{%
8597 \kern\voffset
8598 \kern\topmargin
8599 \kern-1bp\relax

```

```

8600 \hbox to 0pt{%
8601 \kern\hoffset
8602 \kern\ifodd\value{page}%
8603 \oddsidemargin
8604 \else
8605 \evensidemargin
8606 \fi
8607 \kern-1bp\relax
8608 \Hy@TempPageAnchor\relax
8609 \hss
8610 }%
8611 \vss
8612 }%
8613 \fi
8614 }
8615 \g@addto@macro\Hy@EveryPageBoxHook{%
8616 \Hy@EveryPageAnchor
8617 }

```

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.

```

8618 % In newer \LaTeX\ releases this is defined to put a \verb|%| at the end of the
8619 % line in the \textt{toc}file.
8620 % \begin{macrocode}
8621 \providecommand\protected@file@percent{}
8622 \def\addcontentsline#1#2#3{% toc extension, type, tag
8623 \begingroup
8624 \let\label\@gobble
8625 \ifx\@currentHref\@empty
8626 \Hy@Warning{%
8627 No destination for bookmark of \string\addcontentsline,%
8628 \MessageBreak destination is added%
8629 }%
8630 \phantomsection
8631 \fi
8632 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8633 \begingroup
8634 \def\Hy@tempa{#1}%
8635 \ifx\Hy@tempa\Hy@bookmarkstype
8636 \Hy@WarningNoLine{%
8637 bookmark level for unknown #2 defaults to 0%
8638 }%
8639 \else
8640 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8641 \fi
8642 \endgroup
8643 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8644 \fi
8645 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
8646 \Hy@writebookmark{\csname the#2\endcsname}%
8647 {#3}%
8648 {\@currentHref}%
8649 {\Hy@toplevel}%

```

```

8650     {#1}%
8651     \ifHy@verbose
8652     \begingroup
8653       \def\Hy@tempa{#3}%
8654       \@onelevel@sanitize\Hy@tempa
8655       \let\temp@online\on@line
8656       \let\on@line\@empty
8657       \Hy@Info{%
8658         bookmark\temp@online:\MessageBreak
8659         thecounter {\csname the#2\endcsname}\MessageBreak
8660         text {\Hy@tempa}\MessageBreak
8661         reference {\@currentHref}\MessageBreak
8662         toplevel {\Hy@toclevel}\MessageBreak
8663         type {#1}%
8664       }%
8665     \endgroup
8666   \fi
8667   \addtocontents{#1}{%
8668     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}\protected@file@per-
cent
8669   }%
8670 \endgroup
8671 }

```

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

```

8672 \def\contentsline#1#2#3#4{%
8673   \begingroup
8674   \Hy@safe@activestrue
8675   \edef\x{\endgroup
8676     \def\noexpand\Hy@tocdestname{#4}%
8677   }\x
8678   \ifx\Hy@tocdestname\ltx@empty
8679     \csname l@#1\endcsname{#2}{#3}%
8680   \else
8681     \ifcase\Hy@linktoc % none
8682       \csname l@#1\endcsname{#2}{#3}%
8683     \or % section
8684       \csname l@#1\endcsname{%
8685         \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8686       }{#3}%
8687     \or % page
8688       \def\Hy@temp{#3}%
8689       \ifx\Hy@temp\ltx@empty
8690         \csname l@#1\endcsname{#2}{#3}%
8691       \else
8692         \csname l@#1\endcsname{{#2}}{%
8693           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8694         }%
8695       \fi
8696     \else % all
8697       \def\Hy@temp{#3}%
8698       \ifx\Hy@temp\ltx@empty
8699         \csname l@#1\endcsname{%
8700           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8701         }{}%
8702       \else

```

```

8703     \csname l@#1\endcsname{%
8704     \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8705     }{%
8706     \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8707     }%
8708     \fi
8709     \fi
8710     \fi
8711 }

8712 </package>
8713 <*check>
8714 \checklatex
8715 \checkcommand\def\addcontentsline#1#2#3{%
8716 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
8717 }
8718 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8719 </check>
8720 <*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.

```

8721 \let\H@definecounter\@definecounter
8722 \def\@definecounter#1{%
8723   \H@definecounter{#1}%
8724   \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8725 }

```

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.

```

8726 \let\H@newctr\@newctr
8727 \def\@newctr#1[#2]{%
8728   \H@newctr#1[{#2}]%
8729   \expandafter\gdef\csname theH#1\endcsname{%
8730     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8731   }%
8732 }

```

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.

```

8733 \@ifpackageloaded{amsmath}{%
8734   \def\Hy@make@anchor{%
8735     \Hy@MakeCurrentHrefAuto{AMS}%
8736     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8737   }%
8738   \def\Hy@make@df@tag@#1{%
8739     \gdef\df@tag{%

```

```

8740 \maketag@@@{\Hy@make@anchor#1}%
8741 \def\@currentlabel{#1}%
8742 }%
8743 }%
8744 \def\Hy@make@df@tag@@@#1{%
8745 \gdef\df@tag{%
8746 \tagform@{\Hy@make@anchor#1}%
8747 \toks@{\exp{\p@equation{#1}}}%
8748 \edef\@currentlabel{\the\toks@}%
8749 }%
8750 }%
8751 \let\HyOrg@make@df@tag@@\make@df@tag@@
8752 \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
8753 \let\make@df@tag@@\Hy@make@df@tag@@
8754 \let\make@df@tag@@@ \Hy@make@df@tag@@@
8755 }{}

```

Only play with `\seteqlebal` if we are using pdf_{tex}. Other drivers cause problems; requested by Michael Downes (AMS).

```

8756 \ifpackagewith{hyperref}{pdftex}{%
8757 \let\H@seteqlabel\@seteqlabel
8758 \def\@seteqlabel#1{%
8759 \H@seteqlabel{#1}%
8760 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8761 \Hy@raisedlink{%
8762 \hyper@anchorstart{\@currentHref}\hyper@anchorend
8763 }%
8764 }%
8765 }{}

```

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.

```

8766 \let\HyOrg@addtoreset\@addtoreset
8767 \def\@addtoreset#1#2{%
8768 \HyOrg@addtoreset{#1}{#2}%
8769 \expandafter\xdef\csname theH#1\endcsname{%
8770 \expandafter\noexpand
8771 \csname the\@ifundefined{theH#2}{H#2\endcsname
8772 .\noexpand\the\noexpand\value{#1}%
8773 }%
8774 }

```

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

```

8775 \end{package}
8776 \end{check}
8777 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8778 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8779   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8780     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8781       \@addtoreset{#2}{#3}%
8782       \@xp\xdef\csname the#2\endcsname{%
8783         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8784       }%
8785     }%
8786   }%
8787 }%
8788 \end{check}
8789 \end{package}
8790 \ifpackageloaded{amsmath}{%
8791   \ifpackagelater{amsmath}{1999/12/14}{%
8792     \renewcommand*\numberwithin[3][\arabic]{%
8793       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8794         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8795           \HyOrg@addtoreset{#2}{#3}%
8796           \@xp\xdef\csname the#2\endcsname{%
8797             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8798           }%
8799           \@xp\xdef\csname theH#2\endcsname{%
8800             \@xp\@nx
8801             \csname the\@ifundefined{theH#3}{H#3}\endcsname
8802             .\@nx#1{#2}%
8803           }%
8804         }%
8805       }%
8806     }%
8807   }%
8808   \Hy@WarningNoLine{%
8809     \string\numberwithin\space of package `amsmath' %
8810     only fixed\MessageBreak
8811     for version 2000/06/06 v2.12 or newer%
8812   }%
8813 }%
8814 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8815 \ifHy@hyperfigures
8816   \let\Hy@Gin@setfile\Gin@setfile
8817   \def\Gin@setfile#1#2#3{%
8818     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8819   }%
8820 \fi
8821 \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 boldening entries. That would make Makeindex fail (cannot have two | specifiers). The solution is for the author to use generic coding, and put in the requisite \hyperpage in his/her own macros along with the boldness.

This section is poor stuff; it's open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```

8822 \ifHy@hyperindex
8823   \def\HyInd@ParenLeft{({}%
8824   \def\HyInd@ParenRight{)}}%
8825   \def\hyperindexformat#1#2{%
8826     \let\HyOrg@hyperpage\hyperpage
8827     \let\hyperpage\@firstofone
8828     #1{\HyOrg@hyperpage{#2}}%
8829     \let\hyperpage\HyOrg@hyperpage
8830   }%
8831   \Hy@nextfalse
8832   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8833   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8834   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8835   \begingroup
8836     \lccode`|= \expandafter` \HyInd@EncapChar\relax
8837     \lccode`/= `\\ \relax
8838   \lowercase{\endgroup
8839   \ifHy@next
8840     \let\HyInd@org@wrindex\@wrindex
8841     \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|\\}%
8842     \def\HyInd@@wrindex#1#2|#3|#4\\{%
8843       \ifx\\#3\\%
8844         \HyInd@org@wrindex{#1}{#2|hyperpage}%
8845       \else
8846         \HyInd@@@wrindex{#1}{#2}#3\\%
8847       \fi
8848     }%
8849     \def\HyInd@@@wrindex#1#2#3#4\\{%
8850       \def\Hy@temp@A{#3}%
8851       \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8852         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8853       \relax
8854       \HyInd@org@wrindex{#1}{%
8855         #2|hyperindexformat{/#3#4}%
8856       }%
8857     \else
8858       \ifx\\#4\\%
8859         \ifx\Hy@temp@A\HyInd@ParenRight
8860           \HyInd@org@wrindex{#1}{#2|#3}%
8861         \else
8862           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8863         \fi
8864       \else
8865         \HyInd@org@wrindex{#1}{%
8866           #2|#3hyperindexformat{/#4}%
8867         }%
8868       \fi
8869     \fi
8870   }%

```



```

8871 \else
8872 \def\@wrindex#1{\@wrindex#1||\}%
8873 \def\@wrindex#1|#2|#3\{\%
8874 \if@files
8875 \ifx\|#2\%
8876 \protected@write\@indexfile{\%
8877 \string\indexentry{#1|hyperpage}{\thepage}%
8878 }%
8879 \else
8880 \HyInd@@@wrindex{#1}#2\%
8881 \fi
8882 \fi
8883 \endgroup
8884 \@esphack
8885 }%
8886 \def\HyInd@@@wrindex#1#2#3\{\%
8887 \def\Hy@temp@A{#2}%
8888 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8889 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8890 \relax
8891 \protected@write\@indexfile{\%
8892 \string\indexentry{
8893 #1|hyperindexformat{/#2#3}%
8894 }{\thepage}%
8895 }%
8896 \else
8897 \ifx\|#3\%
8898 \ifx\Hy@temp@A\HyInd@ParenRight
8899 \HyInd@DefKey{#1}%
8900 \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8901 \let\Hy@temp\ltx@empty
8902 }{\%
8903 \expandafter\let\expandafter\Hy@temp
8904 \csname HyInd@(\HyInd@key)\endcsname
8905 }%
8906 \protected@write\@indexfile{\%
8907 \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8908 }%
8909 \else
8910 \protected@write\@indexfile{\%
8911 \string\indexentry{#1|#2hyperpage}{\thepage}%
8912 }%
8913 \HyInd@DefKey{#1}%
8914 \expandafter
8915 \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8916 hyperpage%
8917 }%
8918 \fi
8919 \else
8920 \protected@write\@indexfile{\%
8921 \string\indexentry{
8922 #1|#2hyperindexformat{/#3}%
8923 }{\thepage}%
8924 }%
8925 \ifx\Hy@temp@A\HyInd@ParenLeft
8926 \HyInd@DefKey{#1}%
8927 \expandafter

```

```

8928         \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8929             hyperindexformat{/#3}%
8930         }%
8931     \fi
8932 \fi
8933 \fi
8934 }%
8935 \def\HyInd@DefKey#1{%
8936     \begingroup
8937     \let\protect\@unexpandable@protect
8938     \edef\Hy@temp{#1}%
8939     \ltx@onelevel@sanitize\Hy@temp
8940     \global\let\HyInd@key\Hy@temp
8941     \endgroup
8942 }%
8943 \fi
8944 }%
8945 \fi
8946 \Hy@DisableOption{hyperindex}
8947 \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.

```

8948 \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.

```

8949 \def\hyperpage#1{%
8950     \HyInd@hyperpage#1\nohyperpage{}\@nil
8951 }
8952 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8953     \HyInd@@hyperpage{#1}%
8954     #2%
8955     \def\Hy@temp{#3}%
8956     \ifx\Hy@temp\@empty
8957     \else
8958         \ltx@ReturnAfterFi{%
8959             \HyInd@hyperpage#3\@nil
8960         }%
8961     \fi
8962 }
8963 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8964 \def\@hyperpage#1--#2--#3\{\%
8965     \ifx\#2\%
8966         \@commahyperpage{#1}%
8967     \else
8968         \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8969     \fi
8970 }
8971 \def\@commahyperpage#1{\@commahyperpage#1, \}
8972 \def\@commahyperpage#1, #2, #3\{\%
8973     \ifx\#2\%
8974         \HyInd@pagelink{#1}%
8975     \else
8976         \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8977     \fi
8978 }

```

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

```

8979 \def\HyInd@pagelink#1{%
8980   \begingroup
8981   \toks@={}%
8982   \HyInd@removespaces#1 \@nil
8983   \endgroup
8984 }
8985 \def\HyInd@removespaces#1 #2\@nil{%
8986   \toks@=\expandafter{\the\toks@#1}%
8987   \ifx\#2\%
8988     \edef\x{\the\toks@}%
8989     \ifx\x\@empty
8990       \else
8991         \hyperlink{page.\the\toks@}{\the\toks@}%
8992       \fi
8993     \else
8994       \ltx@ReturnAfterFi{%
8995         \HyInd@removespaces#2\@nil
8996       }%
8997     \fi
8998 }

```

45 Compatibility with foiltex

```

8999 \@ifclassloaded{foils}{%
9000   \providecommand*{\ext@table}{lot}%
9001   \providecommand*{\ext@figure}{lof}%
9002 }{}

```

46 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (denis.girou@idris.fr).

```

9003 \@ifclassloaded{seminar}{%
9004   \Hy@seminarslidestrue
9005   \providecommand\theHslide{\arabic{slide}}%
9006 }{%
9007   \Hy@seminarslidesfalse
9008 }
9009 \@ifpackageloaded{slidesec}{%
9010   \providecommand\theHslidesection {\arabic{slidesection}}%
9011   \providecommand\theHslidesubsection{%
9012     \theHslidesection.\arabic{slidesubsection}}%
9013   }%
9014   \def\slide@heading[#1]#2{%
9015     \H@refstepcounter{slidesection}%
9016     \@addtoreset{slidesubsection}{slidesection}%
9017     \addtocontents{los}{%
9018       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
9019       {\@SCTR}{\slideheading.\theslidesection}}%
9020     }%
9021   \def\Hy@tempa{#2}%
9022   \ifx\Hy@tempa\@empty
9023     \else
9024     {%

```

```

9025     \edef\@currentlabel{%
9026       \csname p@slidesection\endcsname\theslidesection
9027     }%
9028     \makeslideheading{#2}%
9029   }%
9030 \fi
9031 \gdef\theslideheading{#1}%
9032 \gdef\theslidesubheading{}%
9033 \ifHy@bookmarksnumbered
9034   \def\Hy@slidetitle{\theslidesection\space #1}%
9035 \else
9036   \def\Hy@slidetitle{#1}%
9037 \fi
9038 \ifHy@hypertextnames
9039   \ifHy@naturalnames
9040     \hyper@@anchor{slideheading.\theslidesection}{\relax}%
9041     \Hy@writebookmark
9042       {\theslidesection}%
9043       {\Hy@slidetitle}%
9044       {slideheading.\theslidesection}%
9045       {1}%
9046       {toc}%
9047   \else
9048     \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
9049     \Hy@writebookmark
9050       {\theslidesection}%
9051       {\Hy@slidetitle}%
9052       {slideheading.\theHslidesection}%
9053       {1}%
9054       {toc}%
9055   \fi
9056 \else
9057   \Hy@GlobalStepCount\Hy@linkcounter
9058   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9059   \Hy@writebookmark
9060     {\theslidesection}%
9061     {\Hy@slidetitle}%
9062     {slideheading.\the\Hy@linkcounter}%
9063     {1}%
9064     {toc}%
9065 \fi
9066 }%
9067 \def\slide@subheading[#1]#2{%
9068   \H@refstepcounter{slidesubsection}%
9069   \addtocontents{los}{%
9070     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
9071     {\@SCTR}{slideheading.\theslidesubsection}%
9072   }%
9073   \def\Hy@tempa{#2}%
9074   \ifx\Hy@tempa\@empty
9075   \else
9076     {%
9077       \edef\@currentlabel{%
9078         \csname p@slidesubsection\endcsname\theslidesubsection
9079       }%
9080       \makeslidesubheading{#2}%
9081     }%

```

```

9082 \fi
9083 \gdef\theslidesubheading{#1}%
9084 \ifHy@bookmarksnumbered
9085   \def\Hy@slidetitle{\theslidesubsection\space #1}%
9086 \else
9087   \def\Hy@slidetitle{#1}%
9088 \fi
9089 \ifHy@hypertextnames
9090   \ifHy@naturalnames
9091     \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
9092     \Hy@writebookmark
9093       {\theslidesubsection}%
9094       {\Hy@slidetitle}%
9095       {slideheading.\theslidesubsection}%
9096       {2}%
9097       {toc}%
9098   \else
9099     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
9100     \Hy@writebookmark
9101       {\theslidesubsection}%
9102       {\Hy@slidetitle}%
9103       {slideheading.\theHslidesubsection}%
9104       {2}%
9105       {toc}%
9106   \fi
9107 \else
9108   \Hy@GlobalStepCount\Hy@linkcounter
9109   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9110   \Hy@writebookmark
9111     {\theslidesubsection}%
9112     {\Hy@slidetitle}%
9113     {slideheading.\the\Hy@linkcounter}%
9114     {1}%
9115     {toc}%
9116 \fi
9117 }%
9118 \providecommand*{\listslidenam}{List of Slides}%
9119 \def\listofslides{%
9120   \section*{%
9121     \listslidenam
9122     \@mkboth{%
9123       \expandafter\MakeUppercase\listslidenam
9124     }{%
9125       \expandafter\MakeUppercase\listslidenam
9126     }%
9127   }%
9128   \def\l@slide##1##2##3##4{%
9129     \slide@undottedcline{%
9130       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
9131     }{%
9132     }%
9133     \let\l@subslide\l@slide
9134     \@startlos
9135   }%
9136   \def\slide@contents{%
9137     \def\l@slide##1##2##3##4{%
9138       \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%

```

```

9139 }%
9140 \let\l@subslide\@gobblefour
9141 \@startlos
9142 }%
9143 \def\Slide@contents{%
9144 \def\l@slide##1##2##3##4{%
9145 \ifcase\lslide@flag
9146 \message{##1 ** \the\c@slidesection}%
9147 \ifnum##1>\c@slidesection
9148 \def\lslide@flag{1}%
9149 {%
9150 \large
9151 \slide@cline{%
9152 \slidenumberline{$\Rightarrow\bullet$}%
9153 {\hyperlink{##4}{##2}}}%
9154 }{##3}%
9155 }%
9156 \else
9157 {%
9158 \large
9159 \slide@cline{%
9160 \slidenumberline{$\surd\;\bullet$}%
9161 {\hyperlink{##4}{##2}}}%
9162 }{##3}%
9163 }%
9164 \fi
9165 \or
9166 \def\lslide@flag{2}%
9167 {%
9168 \large
9169 \slide@cline{%
9170 \slidenumberline{$\bullet$}%
9171 {\hyperlink{##4}{##2}}}%
9172 }{##3}%
9173 }%
9174 \or
9175 {%
9176 \large
9177 \slide@cline{%
9178 \slidenumberline{$\bullet$}%
9179 {\hyperlink{##4}{##2}}}%
9180 }{##3}%
9181 }%
9182 \fi
9183 }%
9184 \def\l@subslide##1##2##3##4{%
9185 \ifnum\lslide@flag=1 %
9186 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}}%
9187 \fi
9188 }%
9189 \def\lslide@flag{0}%
9190 \@startlos
9191 }%
9192 }{}

```

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.)

```

9193 \ifHy@texht
9194 \expandafter\endinput
9195 \fi
9196 \let\real@setref\@setref
9197 \def\@setref#1#2#3{% csname, extract group, refname
9198 \ifx#1\relax
9199 \protect\G@refundefinedtrue
9200 \nfss@text{\reset@font\bfseries ??}%
9201 \@latex@warning{%
9202 Reference `#3' on page \thepage \space undefined%
9203 }%
9204 \else
9205 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9206 \fi
9207 }

```

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

```

9208 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9209 \begingroup
9210 \toks0={\hyper@link{#5}{#4}}%
9211 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9212 \edef\x{\endgroup
9213 \the\toks0 {\the\toks1 }%
9214 }%
9215 \x
9216 }
9217 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9218 \ifx#1\relax
9219 \protect\G@refundefinedtrue
9220 \nfss@text{\reset@font\bfseries ??}%
9221 \@latex@warning{%
9222 Reference `#3' on page \thepage \space undefined%
9223 }%
9224 \else
9225 \protect\hyper@link
9226 {\expandafter\@fifthoffive#1}%
9227 {page.\expandafter\@secondoffive#1}%
9228 {\expandafter\@secondoffive#1}%
9229 \fi
9230 }
9231 \</package>
9232 \< *check>
9233 \checklatex
9234 \checkcommand\def\@setref#1#2#3{%
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 \expandafter#2#1\@null
9243 \fi
9244 }
9245 \</check>

```

```
9246 \package
```

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

```
9247 \def\HyRef@StarSetRef#1{%
9248   \begingroup
9249   \Hy@safe@activetrue
9250   \edef\x{#1}%
9251   \@onelevel@sanitize\x
9252   \edef\x{\endgroup
9253     \noexpand\HyRef@@StarSetRef
9254     \expandafter\noexpand\csname r@\x\endcsname{\x}%
9255   }%
9256   \x
9257 }
9258 \def\HyRef@@StarSetRef#1#2#3{%
9259   \ifx#1\@undefined
9260     \let#1\relax
9261   \fi
9262   \real@setref#1#3{#2}%
9263 }
9264 \def\@refstar#1{%
9265   \HyRef@StarSetRef{#1}\@firstoffive
9266 }
9267 \def\@pagerefstar#1{%
9268   \HyRef@StarSetRef{#1}\@secondoffive
9269 }
9270 \def\@namerefstar#1{%
9271   \HyRef@StarSetRef{#1}\@thirdoffive
9272 }
9273
9274 \Hy@AtBeginDocument{%
9275   \@ifpackageloaded{varioref}{%
9276     \def\@Refstar#1{%
9277       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9278     }%
9279     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9280       \MakeUppercase#1%
9281     }%
9282     \DeclareRobustCommand*\Ref*{%
9283       \@ifstar\@Refstar\HyRef@Ref
9284     }%
9285     \def\HyRef@Ref#1{%
9286       \hyperref[#{1}]{\Ref*{#1}}%
9287     }%
```

Test if we are running new 2019 varioref or old one:

```
9288 %Fmi
9289 \ifdefined\vp@gerefstar
9290   \renewcommand\Vref@star[2][]{%
9291     \begingroup
9292     \let\T@pageref\@pagerefstar
9293     \Ref*{#2}
9294     \vpageref{#1}{#2}%
9295   \endgroup
9296 }%
9297 \renewcommand\Vref[2][]{%
9298   \begingroup
```



```

9299 \let\T@pageref\@pagerefstar
9300 \hyperref[{\#2}]{%
9301 \Ref*{\#2}
9302 \vpageref[\#1]{\#2}%
9303 }%
9304 \endgroup
9305 }%
9306 \renewcommand\vr@f[2][]{%
9307 \begingroup
9308 \let\T@pageref\@pagerefstar
9309 \hyperref[{\#2}]{%
9310 \ref*{\#2}
9311 \vpageref[\#1]{\#2}%
9312 }%
9313 \endgroup
9314 }%
9315 \renewcommand\vref@star[2][]{%
9316 \begingroup
9317 \let\T@pageref\@pagerefstar
9318 \ref*{\#2}
9319 \vpageref[\#1]{\#2}%
9320 \endgroup
9321 }%
old varioref:
9322 \else
9323 \def\Vr@f#1{%
9324 \leavevmode\unskip\vref@space
9325 \hyperref[{\#1}]{%
9326 \Ref*{\#1}%
9327 \let\vref@space\nobreakspace
9328 \@vpageref[\unskip]{\#1}%
9329 }%
9330 }%
9331 \def\vr@f#1{%
9332 \leavevmode\unskip\vref@space
9333 \begingroup
9334 \let\T@pageref\@pagerefstar
9335 \hyperref[{\#1}]{%
9336 \ref*{\#1}%
9337 \vpageref[\unskip]{\#1}%
9338 }%
9339 \endgroup
9340 }%
9341 \fi
9342 %FMi -end mod
9343 }{}%
9344 }
9345
9346 \DeclareRobustCommand*\autopageref{%
9347 \@ifstar{%
9348 \HyRef@autopagerefname\pageref*%
9349 }\HyRef@autopageref
9350 }
9351 \def\HyRef@autopageref#1{%
9352 \hyperref[{\#1}]{\HyRef@autopagerefname\pageref*{\#1}}%
9353 }
9354 \def\HyRef@autopagerefname{%

```

```

9355 \ltx@ifundefined{pageautorefname}{%
9356 \ltx@ifundefined{pagename}{%
9357 \Hy@Warning{No autoref name for `page'}%
9358 }{%
9359 \pagename\nobreakspace
9360 }%
9361 }{%
9362 \pageautorefname\nobreakspace
9363 }%
9364 }

```

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

```

9365 \DeclareRobustCommand*{\autoref}{%
9366 \leavevmode
9367 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9368 }
9369 \def\HyRef@autoref#1#2{%
9370 \begingroup
9371 \Hy@safe@activetrue
9372 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9373 \endgroup
9374 }
9375 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9376 \HyRef@ShowKeysRef{#2}%
9377 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9378 \edef\HyRef@thisref{%
9379 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9380 }%
9381 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9382 \Hy@safe@activesfalse
9383 #3{%
9384 \expandafter\@fifthoffive#1\@empty\@empty\@empty
9385 }{%
9386 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9387 }{%
9388 \HyRef@currentHtag
9389 \expandafter\@firstoffive#1\@empty\@empty\@empty
9390 \null
9391 }%
9392 \else
9393 \protect\G@refundefinedtrue
9394 \nfss@text{\reset@font\bfseries ??}%
9395 \@latex@warning{%
9396 Reference `#2' on page \thepage\space undefined%
9397 }%
9398 \fi
9399 }
9400 \def\HyRef@testreftype#1.#2\{%
9401 \ltx@ifundefined{#1autorefname}{%
9402 \ltx@ifundefined{#1name}{%
9403 \HyRef@StripStar#1\*\@nil{#1}%
9404 \ltx@ifundefined{\HyRef@name autorefname}{%
9405 \ltx@ifundefined{\HyRef@name name}{%
9406 \def\HyRef@currentHtag{%
9407 \Hy@Warning{No autoref name for `#1'}%
9408 }{%
9409 \edef\HyRef@currentHtag{%

```

```

9410         \expandafter\noexpand\csname\HyRef@name name\endcsname
9411         \noexpand~%
9412     }%
9413 }%
9414 }{%
9415     \edef\HyRef@currentHtag{%
9416         \expandafter\noexpand
9417         \csname\HyRef@name autorefname\endcsname
9418         \noexpand~%
9419     }%
9420 }%
9421 }{%
9422     \edef\HyRef@currentHtag{%
9423         \expandafter\noexpand\csname#1name\endcsname
9424         \noexpand~%
9425     }%
9426 }%
9427 }{%
9428     \edef\HyRef@currentHtag{%
9429         \expandafter\noexpand\csname#1autorefname\endcsname
9430         \noexpand~%
9431     }%
9432 }%
9433 }
9434 \def\HyRef@StripStar#1*\#2\@nil#3{%
9435     \def\HyRef@name{#2}%
9436     \ifx\HyRef@name\HyRef@CaseStar
9437         \def\HyRef@name{#1}%
9438     \else
9439         \def\HyRef@name{#3}%
9440     \fi
9441 }
9442 \def\HyRef@CaseStar{*\\}
9443 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

9444 \let\HyRef@ShowKeysRef\@gobble
9445 \def\HyRef@ShowKeysInit{%
9446     \begingroup\expandafter\expandafter\expandafter\endgroup
9447     \expandafter\ifx\csname SK@@label\endcsname\relax
9448     \else
9449         \ifx\SK@ref\@empty
9450         \else
9451             \def\HyRef@ShowKeysRef{%
9452                 \SK@\SK@@ref
9453             }%
9454         \fi
9455     \fi
9456 }
9457 \@ifpackageloaded{showkeys}{%
9458     \HyRef@ShowKeysInit
9459 }{%
9460     \Hy@AtBeginDocument{%
9461         \@ifpackageloaded{showkeys}{%
9462             \HyRef@ShowKeysInit
9463         }%

```

```

9464 }%
9465 }

```

Defaults for the names that `\autoref` uses.

```

9466 \providecommand*{\AMSautorefname}{\equationautorefname}
9467 \providecommand*{\Hfootnoteautorefname}{\footnoteautorefname}
9468 \providecommand*{\Itemautorefname}{\itemautorefname}
9469 \providecommand*{\itemautorefname}{item}
9470 \providecommand*{\equationautorefname}{Equation}
9471 \providecommand*{\footnoteautorefname}{footnote}
9472 \providecommand*{\itemautorefname}{item}
9473 \providecommand*{\figureautorefname}{Figure}
9474 \providecommand*{\tableautorefname}{Table}
9475 \providecommand*{\partautorefname}{Part}
9476 \providecommand*{\appendixautorefname}{Appendix}
9477 \providecommand*{\chapterautorefname}{chapter}
9478 \providecommand*{\sectionautorefname}{section}
9479 \providecommand*{\subsectionautorefname}{subsection}
9480 \providecommand*{\subsubsectionautorefname}{subsubsection}
9481 \providecommand*{\paragraphautorefname}{paragraph}
9482 \providecommand*{\subparagraphautorefname}{subparagraph}
9483 \providecommand*{\FancyVerbLineautorefname}{line}
9484 \providecommand*{\theoremautorefname}{Theorem}
9485 \providecommand*{\pageautorefname}{page}
9486 \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`.

```

9487 \def\pdfTeX{*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo}
9488 \begingroup\expandafter\expandafter\expandafter\endgroup
9489 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9490 \begingroup
9491 \catcode`\| =0 %
9492 \@makeother\%
9493 |\@firstofone{| \endgroup
9494 |def|Hy@pstringdef#1#2{%
9495 |begingroup
9496 |edef~{|string~}%
9497 |xdef|Hy@gtemp{#2}%
9498 |endgroup
9499 |let#1|Hy@gtemp
9500 |\@onelevel@sanitize#1%
9501 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
9502 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9503 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
9504 }%
9505 |def|Hy@ExchangeBackslash#1\#2|@nil{%

```

```

9506      #1%
9507      |ifx|\#2|\%%
9508      |else
9509        \\\%
9510        |ltx@ReturnAfterFi{%
9511          |Hy@ExchangeBackslash#2|@nil
9512        }%
9513      |fi
9514    }%
9515  }%
9516  \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9517    #1%
9518    \ifx\#2\%%
9519    \else
9520      \@backslashchar(%
9521      |ltx@ReturnAfterFi{%
9522        \Hy@ExchangeLeftParenthesis#2\@nil
9523      }%
9524    \fi
9525  }%
9526  \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9527    #1%
9528    \ifx\#2\%%
9529    \else
9530      \@backslashchar)%
9531      |ltx@ReturnAfterFi{%
9532        \Hy@ExchangeRightParenthesis#2\@nil
9533      }%
9534    \fi
9535  }%
9536  \else
9537    \def\Hy@pstringdef#1#2{%
9538      \begingroup
9539        \edef~{\string~}%
9540        \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9541      \endgroup
9542      \let#1\Hy@gtemp
9543    }%
9544  \fi
9545  </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9546  <*pdfTeX>
9547  \providecommand*\XR@ext}{pdf}
9548  \Hy@setbreaklinks{true}
9549  \def\HyPat@ObjRef{%
9550    [0-9]*[1-9][0-9]* 0 R%
9551  }

```

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

```

9552 \let\Hy@pdfminorversion\relax
9553 \begingroup\expandafter\expandafter\expandafter\endgroup
9554 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9555 \begingroup\expandafter\expandafter\expandafter\endgroup
9556 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9557 \else
9558 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9559 \fi
9560 \else
9561 \def\Hy@pdfminorversion{\pdfminorversion}%
9562 \fi
9563 \@ifundefined{Hy@pdfminorversion}{%
9564 \PackageInfo{hyperref}{%
9565 PDF version is not set, because pdfTeX is too old (<1.10a)%
9566 }%
9567 }{%
9568 \ifHy@ocgcolorlinks
9569 \ifnum\Hy@pdfminorversion<5 %
9570 \kvsetkeys{Hyp}{pdfversion=1.5}%
9571 \fi
9572 \fi
9573 \ifHy@setpdfversion
9574 \ifnum\Hy@pdfversion<5 %
9575 \ltx@ifundefined{pdfobjcompresslevel}{%
9576 }{%
9577 \ifHy@verbose
9578 \Hy@InfoNoLine{%
9579 PDF object streams are disabled, because they are%
9580 \MessageBreak
9581 not supported in requested PDF version %
9582 1.\Hy@pdfversion
9583 }%
9584 \fi
9585 \pdfobjcompresslevel=\ltx@zero
9586 }%
9587 \fi
9588 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9589 \else
9590 \let\Hy@temp\ltx@empty
9591 \def\Hy@temp@A#1#2{%
9592 \ifnum#1>\ltx@zero
9593 \edef\Hy@temp{%
9594 \Hy@temp
9595 \space\space
9596 \the#1\space #2%
9597 \ifnum#1=\ltx@one\else s\fi
9598 \MessageBreak
9599 }%
9600 \fi
9601 }%
9602 \Hy@temp@A\pdfastobj{PDF object}%
9603 \Hy@temp@A\pdfastxform{form XObject}%
9604 \Hy@temp@A\pdfastximage{image XObject}%
9605 \Hy@temp@A\pdfastannot{annotation}%
9606 \ltx@ifundefined{pdfastlink}{%
9607 }{%
9608 \Hy@temp@A\pdfastlink{link}%

```

```

9609 }%
9610 \ifx\Hy@temp\ltx@empty
9611   \Hy@pdfminorversion=\Hy@pdfversion\relax
9612 \else
9613   \let\Hy@temp@A\ltx@empty
9614   \ifnum\Hy@pdfversion=4 %
9615     \IfFileExists{pdf14.sty}{%
9616       \def\Hy@temp@A{%
9617         \MessageBreak
9618         Or \string\RequirePackage{pdf14} can be used%
9619         \MessageBreak
9620         before \string\documentclass\space as shortcut%
9621       }%
9622     }{}%
9623   \fi
9624   \Hy@WarningNoLine{%
9625     The PDF version number could not be set,\MessageBreak
9626     because some PDF objects are already written:%
9627     \MessageBreak
9628     \Hy@temp
9629     The version should be set as early as possible:%
9630     \MessageBreak
9631     \space\space
9632     \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9633     \string\relax
9634     \ifnum\Hy@pdfversion<5 %
9635       \ltx@ifundefined{pdfobjcompresslevel}{%
9636         }{%
9637           \MessageBreak
9638           \space\space
9639           \string\pdfobjcompresslevel=0\string\relax
9640         }%
9641       \fi
9642       \Hy@temp@A
9643     }%
9644   \fi
9645 \fi
9646 \PackageInfo{hyperref}{%
9647   \expandafter\string\Hy@pdfminorversion
9648   :=\number\Hy@pdfversion\space
9649 }%
9650 \fi
9651 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9652 }
9653 \Hy@DisableOption{pdfversion}%
9654 \ifHy@ocgcolorlinks
9655   \pdf@ifdraftmode{}{%
9656     \immediate\pdfobj{%
9657       <<%
9658       /Type/OCG%
9659       /Name(View)%
9660       /Usage<<%
9661       /Print<<%
9662       /PrintState/OFF%
9663       >>%
9664       /View<<%
9665       /ViewState/ON%

```

```

9666     >>%
9667     >>%
9668     >>%
9669 }%
9670 \edef\OBJ@OCG@view{\the\pdfastobj\space 0 R}%
9671 \immediate\pdfobj{%
9672     <<%
9673     /Type/OCG%
9674     /Name(Print)%
9675     /Usage<<%
9676     /Print<<%
9677     /PrintState/ON%
9678     >>%
9679     /View<<%
9680     /ViewState/OFF%
9681     >>%
9682     >>%
9683     >>%
9684 }%
9685 \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
9686 \immediate\pdfobj{%
9687     [%
9688     \OBJ@OCG@view\space\OBJ@OCG@print
9689     ]%
9690 }%
9691 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
9692 \pdfcatalog{%
9693     /OCProperties<<%
9694     /OCGs \OBJ@OCGs
9695     /D<<%
9696     /OFF[\OBJ@OCG@print]%
9697     /AS[%
9698     <<%
9699     /Event/View%
9700     /OCGs \OBJ@OCGs
9701     /Category[/View]%
9702     >>%
9703     <<%
9704     /Event/Print%
9705     /OCGs \OBJ@OCGs
9706     /Category[/Print]%
9707     >>%
9708     <<%
9709     /Event/Export%
9710     /OCGs \OBJ@OCGs
9711     /Category[/Print]%
9712     >>%
9713     ]%
9714     >>%
9715     >>%
9716 }%
9717 \beginingroup
9718 \edef\x{\endgroup
9719 \pdfpageresources{%
9720 \the\pdfpageresources
9721 /Properties<<%
9722 /OCView \OBJ@OCG@view

```



```

9723         /OCPrint \OBJ@OCG@print
9724     >>%
9725 }%
9726 }%
9727 \x
9728 }%
9729 \Hy@AtBeginDocument{%
9730     \def\Hy@colorlink#1{%
9731         \begingroup
9732         \ifHy@ocgcolorlinks
9733             \def\Hy@ocgcolor{#1}%
9734             \setbox0=\hbox\bgroup\color@begingroup
9735         \else
9736             \HyColor@UseColor#1%
9737         \fi
9738     }%
9739     \def\Hy@endcolorlink{%
9740         \ifHy@ocgcolorlinks
9741             \color@endgroup\egroup
9742         \mbox{%
9743             \pdfliteral page{/OC/OCPrint BDC}%
9744             \rlap{\copy0}%
9745             \pdfliteral page{EMC/OC/OCView BDC}%
9746             \begingroup
9747             \expandafter\HyColor@UseColor\Hy@ocgcolor
9748             \box0 %
9749             \endgroup
9750             \pdfliteral page{EMC}%
9751         }%
9752     \fi
9753     \endgroup
9754 }%
9755 }%
9756 \else
9757 \Hy@DisableOption{ocgcolorlinks}%
9758 \fi

```

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

```

9759 \def\setpdfinkmargin#1{%
9760     \begingroup
9761     \setlength{\dimen@}{#1}%
9762     \expandafter\endgroup
9763     \expandafter\pdfinkmargin\the\dimen@\relax
9764 }
9765 \ifx\pdfstartlink\@undefined% less than version 14
9766     \let\pdfstartlink\pdfannotlink
9767     \let\pdfinkmargin\@tempdima
9768     \let\pdfxform\pdfform
9769     \let\pdflastxform\pdfastform
9770     \let\pdfrefxform\pdfrefform
9771 \else
9772     \pdfinkmargin1pt %
9773 \fi

```

First set up the default linking

```
9774 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```
9775 \Hy@WrapperDef\new@pdfink#1{%

```

```

9776 \ifhmode
9777   \@savsf\spacefactor
9778 \fi
9779 \Hy@SaveLastskip
9780 \Hy@VerboseAnchor{#1}%
9781 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9782 \Hy@DestName\Hy@pstringDest\@pdfview
9783 \Hy@RestoreLastskip
9784 \ifhmode
9785   \spacefactor\@savsf
9786 \fi
9787 }
9788 \let\pdf@endanchor\@empty

```

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

```

9789 \def\Hy@DestName#1#2{%
9790   \pdfdest name{#1}#2\relax
9791 }

```

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.

```

9792 \providecommand*\@pdfborder{0 0 1}
9793 \providecommand*\@pdfborderstyle{}
9794 \def\Hy@undefinedname{UNDEFINED}
9795 \def\find@pdflink#1#2{%
9796   \leavevmode
9797   \protected@edef\Hy@testname{#2}%
9798   \ifx\Hy@testname\@empty
9799     \Hy@Warning{%
9800       Empty destination name,\MessageBreak
9801       using ``\Hy@undefinedname'%
9802     }%
9803     \let\Hy@testname\Hy@undefinedname
9804   \else
9805     \Hy@pstringdef\Hy@testname{%
9806       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9807     }%
9808   \fi
9809   \Hy@StartlinkName{%
9810     \ifHy@pdfa /F 4\fi
9811     \Hy@setpdfborder
9812     \Hy@setpdfhighlight
9813     \ifx\CurrentBorderColor\relax
9814       \else
9815         /C[\CurrentBorderColor]%
9816     \fi
9817   }\Hy@testname
9818   \expandafter\Hy@colorlink\csname @#1color\endcsname
9819 }
9820 \def\Hy@StartlinkName#1#2{%
9821   \pdfstartlink attr{#1}goto name{#2}\relax
9822 }
9823 \def\close@pdflink{%
9824   \Hy@endcolorlink

```

```

9825 \Hy@VerboseLinkStop
9826 \pdfendlink
9827 }
9828 \def\hyper@anchor#1{%
9829 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9830 }
9831 \def\hyper@anchorstart#1{%
9832 \new@pdfink{#1}%
9833 \Hy@activeanchortrue
9834 }
9835 \def\hyper@anchorend{%
9836 \pdf@endanchor
9837 \Hy@activeanchorfalse
9838 }
9839 \def\hyper@linkstart#1#2{%
9840 \Hy@VerboseLinkStart{#1}{#2}%
9841 \ltx@ifundefined{@#1bordercolor}{%
9842 \let\CurrentBorderColor\relax
9843 }{%
9844 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9845 }%
9846 \find@pdfink{#1}{#2}%
9847 }
9848 \def\hyper@linkend{\close@pdfink}
9849 \def\hyper@link#1#2#3{%
9850 \Hy@VerboseLinkStart{#1}{#2}%
9851 \ltx@ifundefined{@#1bordercolor}{%
9852 \let\CurrentBorderColor\relax
9853 }{%
9854 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9855 }%
9856 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9857 \close@pdfink
9858 }
9859 \let\CurrentBorderColor\@linkbordercolor
9860 \def\hyper@linkurl#1#2{%
9861 \begingroup
9862 \Hy@pstringdef\Hy@pstringURI{#2}%
9863 \hyper@chars
9864 \leavevmode
9865 \pdfstartlink
9866 attr{%
9867 \Hy@setpdfborder
9868 \Hy@setpdfhighlight
9869 \ifx\@urlbordercolor\relax
9870 \else
9871 /C[\@urlbordercolor]%
9872 \fi
9873 }%
9874 user{%
9875 /Subtype/Link%
9876 \ifHy@pdfa /F 4\fi
9877 /A<<%
9878 /Type/Action%
9879 /S/URI%
9880 /URI(\Hy@pstringURI)%
9881 \ifHy@href@ismap

```

```

9882         /IsMap true%
9883     \fi
9884     \Hy@href@nextactionraw
9885     >>%
9886 }%
9887 \relax
9888 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9889 \close@pdfink
9890 \endgroup
9891 }
9892 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9893 \begingroup
9894 \def\Hy@pstringF{#2}%
9895 \Hy@CleanupFile\Hy@pstringF
9896 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9897 \Hy@pstringdef\Hy@pstringD{#3}%
9898 \Hy@MakeRemoteAction
9899 \leavevmode
9900 \pdfstartlink
9901 attr{%
9902     \Hy@setpdfborder
9903     \Hy@setpdfhighlight
9904     \ifx\@filebordercolor\relax
9905     \else
9906         /C[\@filebordercolor]%
9907     \fi
9908 }%
9909 user {%
9910     /Subtype/Link%
9911     \ifHy@pdfa /F 4\fi
9912     /A<<%
9913     /F(\Hy@pstringF)%
9914     /S/GoToR%
9915     \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}

```

```

9916     \ifx\#3\%
9917     /D[\Hy@href@page\@pdfremotestartview]%
9918     \else
9919     /D(\Hy@pstringD)%
9920     \fi
9921     \Hy@href@nextactionraw
9922     >>%
9923 }%
9924 \relax
9925 \Hy@colorlink\@filecolor#1\Hy@xspace@end
9926 \close@pdfink

```

```

9927 \endgroup
9928 }
9929 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
9930 \beginingroup
9931 \Hy@pstringdef\Hy@pstringF{#1}%
9932 \Hy@pstringdef\Hy@pstringP{#3}%
9933 \leavevmode
9934 \pdfstartlink
9935 attr{%
9936 \Hy@setpdfborder
9937 \Hy@setpdfhighlight
9938 \ifx\@runbordercolor\relax
9939 \else
9940 /C[\@runbordercolor]%
9941 \fi
9942 }%
9943 user {%
9944 /Subtype/Link%
9945 \ifHy@pdfa /F 4\fi
9946 /A<<%
9947 /F(\Hy@pstringF)%
9948 /S/Launch%
9949 \Hy@SetNewWindow
9950 \ifx\|#3\|
9951 \else
9952 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9953 \fi
9954 \Hy@href@nextactionraw
9955 >>%
9956 }%
9957 \relax
9958 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9959 \close@pdflink
9960 \endgroup
9961 }

```

\PDF@SetupDox

```

9962 \def\PDF@SetupDoc{%
9963 \ifx\@pdfpagescrop\@empty
9964 \else
9965 \edef\process@me{%
9966 \pdfpagesattr={%
9967 /CropBox[\@pdfpagescrop]%
9968 \expandafter\ifx\expandafter\|the\pdfpagesattr\|
9969 \else
9970 ^~J\the\pdfpagesattr
9971 \fi
9972 }%
9973 }%
9974 \process@me
9975 \fi
9976 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9977 \pdfcatalog{%
9978 /PageMode/\@pdfpagemode
9979 \ifx\@baseurl\@empty
9980 \else
9981 /URI<</Base(\Hy@pstringB)>>%

```

```

9982 \fi
9983 }%
9984 \ifx\@pdfstartpage\@empty
9985 \else
9986 \ifx\@pdfstartview\@empty
9987 \else
9988 openaction goto page\@pdfstartpage{\@pdfstartview}%
9989 \fi
9990 \fi
9991 \edef\Hy@temp{%
9992 \ifHy@pdftoolbar\else /HideToolbar true\fi
9993 \ifHy@pdfmenubar\else /HideMenubar true\fi
9994 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9995 \ifHy@pdffitwindow /FitWindow true\fi
9996 \ifHy@pdfcenterwindow /CenterWindow true\fi
9997 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9998 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9999 \Hy@UseNameKey{Direction}\@pdfdirection
10000 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10001 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10002 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10003 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10004 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10005 \Hy@UseNameKey{Duplex}\@pdfduplex
10006 \ifx\@pdfpicktraybypdfsize\@empty
10007 \else
10008 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10009 \fi
10010 \ifx\@pdfprintpagerange\@empty
10011 \else
10012 /PrintPageRange[\@pdfprintpagerange]%
10013 \fi
10014 \ifx\@pdfnumcopies\@empty
10015 \else
10016 /NumCopies \@pdfnumcopies
10017 \fi
10018 }%
10019 \pdfcatalog{%
10020 \ifx\Hy@temp\@empty
10021 \else
10022 /ViewerPreferences<<\Hy@temp>>%
10023 \fi
10024 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10025 \ifx\@pdflang\relax
10026 \else
10027 /Lang(\@pdflang)%
10028 \fi
10029 }%
10030 }

```

\PDF@FinishDoc

```

10031 \def\PDF@FinishDoc{%
10032 \pdf@ifdraftmode{ }{%
10033 \Hy@UseMaketitleInfos
10034 \HyInfo@GenerateAddons
10035 \pdfinfo{%
10036 /Author(\@pdfauthor)%
10037 /Title(\@pdftitle)%

```

```

10038 /Subject(\@pdfsubject)%
10039 /Creator(\@pdfcreator)%
10040 \ifx\@pdfcreationdate\@empty
10041 \else
10042 /CreationDate(\@pdfcreationdate)%
10043 \fi
10044 \ifx\@pdfmoddate\@empty
10045 \else
10046 /ModDate(\@pdfmoddate)%
10047 \fi
10048 \ifx\@pdfproducer\relax
10049 \else
10050 /Producer(\@pdfproducer)%
10051 \fi
10052 /Keywords(\@pdfkeywords)%
10053 \ifx\@pdftrapped\@empty
10054 \else
10055 /Trapped/\@pdftrapped
10056 \fi
10057 \HyInfo@Addons
10058 }%
10059 }%
10060 \Hy@DisableOption{pdfauthor}%
10061 \Hy@DisableOption{pdftitle}%
10062 \Hy@DisableOption{pdfsubject}%
10063 \Hy@DisableOption{pdfcreator}%
10064 \Hy@DisableOption{addtopdfcreator}%
10065 \Hy@DisableOption{pdfcreationdate}%
10066 \Hy@DisableOption{pdfmoddate}%
10067 \Hy@DisableOption{pdfproducer}%
10068 \Hy@DisableOption{pdfkeywords}%
10069 \Hy@DisableOption{pdftrapped}%
10070 \Hy@DisableOption{pdfinfo}%
10071 }

```

`\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`.

```

10072 \def\hyper@pagetransition{%
10073 \ifx\@pdfpagetransition\relax
10074 \else
10075 \expandafter\Hy@RemoveTransPageAttr
10076 \the\pdfpageattr^^J/Trans{>>\END
10077 \ifx\@pdfpagetransition\@empty
10078 \else
10079 \edef\@processme{%
10080 \global\pdfpageattr{%
10081 \the\pdfpageattr
10082 ^^J/Trans << /S /\@pdfpagetransition\space >>%
10083 }%
10084 }%
10085 \@processme
10086 \fi
10087 \fi
10088 }

```

`\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.

```

10089 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10090   \ifx\#2\%
10091     \global\pdfpageattr{#1}%
10092   \else
10093     \Hy@RemoveTransPageAttr#1#4\END
10094   \fi
10095 }

```

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

```

10096 \def\hyper@pageduration{%
10097   \ifx\@pdfpageduration\relax
10098   \else
10099     \expandafter
10100     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10101     \ifx\@pdfpageduration\@empty
10102     \else
10103       \edef\@processme{%
10104         \global\pdfpageattr{%
10105           \the\pdfpageattr
10106             ^^J/Dur \@pdfpageduration\space
10107         }%
10108       }%
10109       \@processme
10110     \fi
10111   \fi
10112 }

```

`\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.

```

10113 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10114   \ifx\#2\%
10115     \global\pdfpageattr{#1}%
10116   \else
10117     \Hy@RemoveDurPageAttr#1#4\END
10118   \fi
10119 }

```

`\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).

```

10120 \def\hyper@pagehidden{%
10121   \ifHy@useHidKey
10122   \expandafter
10123   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
10124   \ifHy@pdfpagehidden
10125     \edef\@processme{%
10126       \global\pdfpageattr{%
10127         \the\pdfpageattr
10128           ^^J/Hid true % SPACE

```



```

10129     }%
10130     }%
10131     \@processme
10132   \fi
10133 \fi
10134 }

```

`\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.

```

10135 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10136   \ifx\#2\%
10137     \global\pdfpageattr{#1}%
10138   \else
10139     \Hy@RemoveHidPageAttr#1#4\END
10140   \fi
10141 }

10142 \pdf@ifdraftmode{}{%
10143   \g@addto@macro\Hy@EveryPageHook{%
10144     \hyper@pagetransition
10145     \hyper@pageduration
10146     \hyper@pagehidden
10147   }%
10148 }

```

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

```

10149 </pdfTeX>
10150 <*pdfTeX | xetex>
10151 \Hy@AtBeginDocument{%
10152   \ifHy@setpagesize
10153     \expandafter\@firstofone
10154   \else
10155     \expandafter\@gobble
10156   \fi
10157 }%
10158 \@ifclassloaded{seminar}{%
10159 <*pdfTeX>
10160   \setlength{\pdfhorigin}{1truein}%
10161   \setlength{\pdfvorigin}{1truein}%
10162 </pdfTeX>
10163   \ifportrait
10164     \ifdim\paperwidth=\z@
10165     \else
10166       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10167     \fi
10168     \ifdim\paperheight=\z@
10169     \else
10170       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10171     \fi
10172   \else
10173     \ifdim\paperheight=\z@
10174     \else
10175       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10176     \fi
10177     \ifdim\paperwidth=\z@

```

```

10178     \else
10179     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10180     \fi
10181   \fi
10182 }{%
10183   \ltx@ifundefined{stockwidth}{%
10184     \ifdim\paperwidth>\z@
10185       \setlength{\pdfpagewidth}{\paperwidth}%
10186       \fi
10187     \ifdim\paperheight>\z@
10188       \setlength{\pdfpageheight}{\paperheight}%
10189       \fi
10190   }{%
10191     \ifdim\stockwidth>\z@
10192       \setlength{\pdfpagewidth}{\stockwidth}%
10193       \fi
10194     \ifdim\stockheight>\z@
10195       \setlength{\pdfpageheight}{\stockheight}%
10196       \fi
10197   }%
10198 }%
10199 }%
10200 \Hy@DisableOption{setpagesize}%
10201 }
10202 </pdfTeX | xetex>
10203 <*pdfTeX>
10204 \def\Acrobatmenu#1#2{%
10205   \Hy@Acrobatmenu{#1}{#2}{%
10206     \leavevmode
10207     \EdefEscapeName\Hy@temp@menu{#1}%
10208     \pdfstartlink
10209     attr{%
10210       \Hy@setpdfborder
10211       \Hy@setpdfhighlight
10212       \ifx\@menubordercolor\relax
10213         \else
10214           /C[\@menubordercolor]%
10215         \fi
10216     }%
10217     user{%
10218       /Subtype/Link%
10219       \ifHy@pdfa /F 4\fi
10220       /A<<%
10221         /S/Named%
10222         /N/\Hy@temp@menu
10223         \Hy@href@nextactionraw
10224       >>%
10225     }%
10226     \relax
10227     \Hy@colorlink\@menucolor#2%
10228     \close@pdflink
10229   }%
10230 }

```

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.

```
10231 \def\Hy@FixNotFirstPage{%
10232   \gdef\Hy@FixNotFirstPage{%
10233     \setbox\AtBeginShipoutBox=\hbox{%
10234       \copy\AtBeginShipoutBox
10235     }%
10236   }%
10237 }
10238 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%%
10239 }{%%
10240   \AtBeginShipout{\Hy@FixNotFirstPage}%
10241 }
10242 \end{pdfTeX}
```

47.3 hypertex

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: html:

name: html:

end: html:

image: html:

base_name: html:<base href = "href_string">

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a *name* command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the *name* command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters

should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

10243 (*hypertext)
10244 \providecommand*\XR@ext}{dvi}
10245 \let\PDF@FinishDoc\ltx@empty
10246 \def\PDF@SetupDoc{%
10247   \ifx\@baseurl\@empty
10248   \else
10249     \special{html:<base href="\@baseurl">}%
10250   \fi
10251 }
10252 \Hy@WrapperDef\hyper@anchor#1{%
10253   \Hy@SaveLastskip
10254   \Hy@VerboseAnchor{#1}%
10255   \begingroup
10256     \let\protect=\string
10257     \hyper@chars
10258     \special{html:<a name=%
10259       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10260   \endgroup
10261   \Hy@activeanchortrue
10262   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10263   \special{html:</a>}%
10264   \Hy@activeanchorfalse
10265   \Hy@RestoreLastskip
10266 }
10267 \Hy@WrapperDef\hyper@anchorstart#1{%
10268   \Hy@SaveLastskip
10269   \Hy@VerboseAnchor{#1}%
10270   \begingroup
10271     \hyper@chars
10272     \special{html:<a name=%
10273       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10274   \endgroup
10275   \Hy@activeanchortrue
10276 }
10277 \def\hyper@anchorend{%
10278   \special{html:</a>}%
10279   \Hy@activeanchorfalse
10280   \Hy@RestoreLastskip
10281 }
10282 \def\@urltype{url}
10283 \def\hyper@linkstart#1#2{%
10284   \Hy@VerboseLinkStart{#1}{#2}%
10285   \expandafter\Hy@colorlink\csname @#1color\endcsname
10286   \def\Hy@tempa{#1}%
10287   \ifx\Hy@tempa\@urltype
10288     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10289   \else
10290     \begingroup
10291       \hyper@chars
10292       \special{html:<a href=%
10293         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10294     \endgroup
10295   \fi
10296 }
10297 \def\hyper@linkend{%

```

```

10298 \special{html:</a>}}%
10299 \Hy@endcolorlink
10300 }
10301 \def\hyper@linkfile#1#2#3{%
10302 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10303 }
10304 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why L^AT_EX constructs make this totally foul up, and make us revert to basic T_EX. I do not know.

```

10305 \leavevmode
10306 \ifHy@raiselinks
10307 \Hy@SaveSpaceFactor
10308 \Hy@SaveSavedSpaceFactor
10309 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10310 \Hy@RestoreSavedSpaceFactor
10311 \@linkdim\dp\@tempboxa
10312 \lower\@linkdim\hbox{%
10313 \hyper@chars
10314 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10315 }%
10316 \Hy@colorlink\@urlcolor
10317 \Hy@RestoreSpaceFactor
10318 #1%
10319 \Hy@SaveSpaceFactor
10320 \@linkdim\ht\@tempboxa

```

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

```

10321 \advance\@linkdim by -6.5\p@
10322 \raise\@linkdim\hbox{\special{html:</a>}}}%
10323 \Hy@endcolorlink
10324 \Hy@RestoreSpaceFactor
10325 \else
10326 \begingroup
10327 \hyper@chars
10328 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10329 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10330 \special{html:</a>}}%
10331 \Hy@endcolorlink
10332 \endgroup
10333 \fi
10334 }

```

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

```

10335 \def\hyper@link#1#2#3{%
10336 \Hy@VerboseLinkStart{#1}{#2}%
10337 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}}%
10338 }
10339 \def\hyper@image#1#2{%
10340 \begingroup
10341 \hyper@chars
10342 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
10343 \endgroup
10344 }
10345 </hypertex>

```

10346 \langle *dviwindo \rangle

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, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by `\baselineskip` high is used.

```
10347 \providecommand*\XR@ext}{dvi}
10348 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10349 \Hy@WrapperDef\hyper@anchor#1{%
10350   \Hy@SaveLastskip
10351   \Hy@VerboseAnchor{#1}%
10352   \begingroup
10353     \let\protect=\string
10354     \special{mark: #1}%
10355   \endgroup
10356   \Hy@activeanchortrue
10357   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10358   \Hy@activeanchorfalse
10359   \Hy@RestoreLastskip
10360 }
10361 \Hy@WrapperDef\hyper@anchorstart#1{%
10362   \Hy@SaveLastskip
10363   \Hy@VerboseAnchor{#1}%
10364   \special{mark: #1}%
10365   \Hy@activeanchortrue
10366 }
10367 \def\hyper@anchorend{%
10368   \Hy@activeanchorfalse
10369   \Hy@RestoreLastskip
10370 }
10371 \def\hyper@linkstart#1#2{%
10372   \Hy@VerboseLinkStart{#1}{#2}%
10373   \expandafter\Hy@colorlink\csname @#1color\endcsname
10374   \special{button: %
10375     10000000 %
10376     \number\baselineskip\space
10377     #2%
10378   }%
10379 }
10380 \def\hyper@linkend{%
10381   \Hy@endcolorlink
10382 }
10383 \def\hyper@link#1#2#3{%
10384   \Hy@VerboseLinkStart{#1}{#2}%
10385   \leavevmode
10386   \ifHy@raiselinks
10387     \Hy@SaveSpaceFactor
```

```

10388 \Hy@SaveSavedSpaceFactor
10389 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10390 \Hy@RestoreSavedSpaceFactor
10391 \@linkdim\dp\@tempboxa
10392 \lower\@linkdim\hbox{%
10393   \special{button: %
10394     \number\wd\@tempboxa\space
10395     \number\ht\@tempboxa\space
10396     #2%
10397   }%
10398   \expandafter\Hy@colorlink\csname @#1color\endcsname
10399   \Hy@RestoreSpaceFactor
10400   #3\Hy@xspace@end
10401   \Hy@SaveSpaceFactor
10402   \Hy@endcolorlink
10403 }%
10404 \@linkdim\ht\@tempboxa
10405 \advance\@linkdim by -6.5\p@
10406 \raise\@linkdim\hbox{}%
10407 \Hy@RestoreSpaceFactor
10408 \else
10409   \special{button: %
10410     \number\wd\@tempboxa\space
10411     \number\ht\@tempboxa\space
10412     #2%
10413   }%
10414   \expandafter\Hy@colorlink\csname @#1color\endcsname
10415   #3\Hy@xspace@end
10416   \Hy@endcolorlink
10417 \fi
10418 }
10419 \def\hyper@linkurl#1#2{%
10420   \begingroup
10421   \hyper@chars
10422   \leavevmode
10423   \ifHy@raiselinks
10424     \Hy@SaveSpaceFactor
10425     \Hy@SaveSavedSpaceFactor
10426     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10427     \Hy@RestoreSavedSpaceFactor
10428     \@linkdim\dp\@tempboxa
10429     \lower\@linkdim\hbox{%
10430       \special{button: %
10431         \number\wd\@tempboxa\space
10432         \number\ht\@tempboxa\space
10433         launch: \wwwbrowser\space
10434         #2%
10435       }%
10436       \Hy@colorlink\@urlcolor
10437       \Hy@RestoreSpaceFactor
10438       #1\Hy@xspace@end
10439       \Hy@SaveSpaceFactor
10440       \Hy@endcolorlink
10441     }%
10442     \@linkdim\ht\@tempboxa
10443     \advance\@linkdim by -6.5\p@
10444     \raise\@linkdim\hbox{}%

```

```

10445 \Hy@RestoreSpaceFactor
10446 \else
10447 \special{button: %
10448 \number\wd\@tempboxa\space
10449 \number\ht\@tempboxa\space
10450 launch: \wwwbrowser\space
10451 #2%
10452 }%
10453 \Hy@colorlink\@urlcolor
10454 #1\Hy@xspace@end
10455 \Hy@endcolorlink
10456 \fi
10457 \endgroup
10458 }
10459 \def\hyper@linkfile#1#2#3{%
10460 \begingroup
10461 \hyper@chars
10462 \leavevmode
10463 \ifHy@raiselinks
10464 \Hy@SaveSpaceFactor
10465 \Hy@SaveSavedSpaceFactor
10466 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10467 \Hy@RestoreSavedSpaceFactor
10468 \@linkdim\dp\@tempboxa
10469 \lower\@linkdim\hbox{%
10470 \special{button: %
10471 \number\wd\@tempboxa\space
10472 \number\ht\@tempboxa\space
10473 #3,%
10474 file: #2%
10475 }%
10476 \Hy@colorlink\@filecolor
10477 \Hy@RestoreSpaceFactor
10478 #1\Hy@xspace@end
10479 \Hy@SaveSpaceFactor
10480 \Hy@endcolorlink
10481 }%
10482 \@linkdim\ht\@tempboxa
10483 \advance\@linkdim by -6.5\p@
10484 \raise\@linkdim\hbox{}%
10485 \Hy@RestoreSpaceFactor
10486 \else
10487 \special{button: %
10488 \number\wd\@tempboxa\space
10489 \number\ht\@tempboxa\space
10490 #3,%
10491 file: #2%
10492 }%
10493 \Hy@colorlink\@filecolor
10494 #1\Hy@xspace@end
10495 \Hy@endcolorlink
10496 \fi
10497 \endgroup
10498 }
10499 \HyInfo@AddonUnsupportedtrue
10500 \def\PDF@FinishDoc{%
10501 \Hy@UseMaketitleInfos

```



```

10502 \HyInfo@TrappedUnsupported
10503 \special{PDF: Keywords \@pdfkeywords}%
10504 \special{PDF: Title \@pdftitle}%
10505 \special{PDF: Creator \@pdfcreator}%
10506 \ifx\@pdfcreationdate\@empty
10507 \else
10508 \special{PDF: CreationDate \@pdfcreationdate}%
10509 \fi
10510 \ifx\@pdfmoddate\@empty
10511 \else
10512 \special{PDF: ModDate \@pdfmoddate}%
10513 \fi
10514 \special{PDF: Author \@pdfauthor}%
10515 \ifx\@pdfproducer\relax
10516 \else
10517 \special{PDF: Producer \@pdfproducer}%
10518 \fi
10519 \special{PDF: Subject \@pdfsubject}%
10520 \Hy@DisableOption{pdfauthor}%
10521 \Hy@DisableOption{pdftitle}%
10522 \Hy@DisableOption{pdfsubject}%
10523 \Hy@DisableOption{pdfcreator}%
10524 \Hy@DisableOption{addtopdfcreator}%
10525 \Hy@DisableOption{pdfcreationdate}%
10526 \Hy@DisableOption{pdfcreationdate}%
10527 \Hy@DisableOption{pdfmoddate}%
10528 \Hy@DisableOption{pdfproducer}%
10529 \Hy@DisableOption{pdfkeywords}%
10530 \Hy@DisableOption{pdftrapped}%
10531 \Hy@DisableOption{pdfinfo}%
10532 }
10533 \def\PDF@SetupDoc{%
10534 \ifx\@baseurl\@empty
10535 \else
10536 \special{PDF: Base \@baseurl}%
10537 \fi
10538 \ifx\@pdfpagescrop\@empty\else
10539 \special{PDF: BBox \@pdfpagescrop}%
10540 \fi
10541 \def\Hy@temp{}%
10542 \ifx\@pdfstartpage\@empty
10543 \else
10544 \ifx\@pdfstartview\@empty
10545 \else
10546 \edef\Hy@temp{%
10547 ,Page=\@pdfstartpage
10548 ,View=\@pdfstartview
10549 }%
10550 \fi
10551 \fi
10552 \edef\Hy@temp{%
10553 \noexpand\pdfmark{%
10554 pdfmark=/DOCVIEW,%
10555 PageMode=/\@pdfpagemode
10556 \Hy@temp
10557 }%
10558 }%

```

```

10559 \Hy@temp
10560 \ifx\@pdfpagescrop\@empty
10561 \else
10562   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10563 \fi
10564 \edef\Hy@temp{%
10565   \ifHy@pdftoolbar\else /HideToolbar true\fi
10566   \ifHy@pdfmenubar\else /HideMenubar true\fi
10567   \ifHy@pdfwindowui\else /HideWindowUI true\fi
10568   \ifHy@pdffitwindow /FitWindow true\fi
10569   \ifHy@pdfcenterwindow /CenterWindow true\fi
10570   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10571   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10572   \Hy@UseNameKey{Direction}\@pdfdirection
10573   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10574   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10575   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10576   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10577   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10578   \Hy@UseNameKey{Duplex}\@pdfduplex
10579   \ifx\@pdfpicktraybypdfsize\@empty
10580   \else
10581     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10582   \fi
10583   \ifx\@pdfprintpagerange\@empty
10584   \else
10585     /PrintPageRange[\@pdfprintpagerange]%
10586   \fi
10587   \ifx\@pdfnumcopies\@empty
10588   \else
10589     /NumCopies \@pdfnumcopies
10590   \fi
10591 }%
10592 \pdfmark{pdfmark=/PUT,%
10593   Raw={%
10594     \string{Catalog\string}<<%
10595     \ifx\Hy@temp\@empty
10596     \else
10597       /ViewerPreferences<<\Hy@temp>>%
10598     \fi
10599     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10600     \ifx\@pdflang\relax
10601     \else
10602       /Lang(\@pdflang)%
10603     \fi
10604     >>%
10605   }%
10606 }%
10607 }
10608 </dviwindo>
10609 <*dvipdfm | xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10610 \providecommand*\XR@ext}{pdf}
10611 \Hy@setbreaklinks{true}

```

```

10612 \def\HyPat@ObjRef{%
10613   @[\ ]+{%
10614 }
10615 \newsavebox{\pdfm@box}
10616 \def\@pdfm@mark#1{\special{pdf:#1}}
10617 \Hy@WrapperDef\@pdfm@dest#1{%
10618   \Hy@SaveLastskip
10619   \Hy@VerboseAnchor{#1}%
10620   \begingroup
10621     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10622     \def\x{XYZ}%
10623     \ifx\x\@pdfview
10624       \def\x{XYZ @xpos @ypos null}%
10625     \else
10626       \def\x{FitH}%
10627       \ifx\x\@pdfview
10628         \def\x{FitH @ypos}%
10629       \else
10630         \def\x{FitBH}%
10631         \ifx\x\@pdfview
10632           \def\x{FitBH @ypos}%
10633         \else
10634           \def\x{FitV}%
10635           \ifx\x\@pdfview
10636             \def\x{FitV @xpos}%
10637           \else
10638             \def\x{FitBV}%
10639             \ifx\x\@pdfview
10640               \def\x{FitBV @xpos}%
10641             \else
10642               \def\x{Fit}%
10643               \ifx\x\@pdfview
10644                 \let\x\@pdfview
10645               \else
10646                 \def\x{FitB}%
10647                 \ifx\x\@pdfview
10648                   \let\x\@pdfview
10649                 \else
10650                   \def\x{FitR}%
10651                   \ifx\x\@pdfview
10652                     \Hy@Warning{'pdfview=FitR' is not supported}%
10653                     \def\x{XYZ @xpos @ypos null}%
10654                   \else
10655                     \@onelevel@sanitize\@pdfview
10656                     \Hy@Warning{%
10657                       Unknown value '\@pdfview' for pdfview%
10658                     }%
10659                     \def\x{XYZ @xpos @ypos null}%
10660                   \fi
10661                 \fi
10662               \fi
10663             \fi
10664           \fi
10665         \fi
10666       \fi
10667     \fi
10668   \@pdfm@mark{dest (\Hy@pstringDest) [\thispage /\x]}%

```

```

10669 \endgroup
10670 \Hy@RestoreLastskip
10671 }
10672 \providecommand*\@pdfview{XYZ}
10673 \providecommand*\@pdfborder{0 0 1}
10674 \providecommand*\@pdfborderstyle{}
10675 \def\hyper@anchor#1{%
10676   \@pdfm@dest{#1}%
10677 }
10678 \def\hyper@anchorstart#1{%
10679   \Hy@activeanchortrue
10680   \@pdfm@dest{#1}%
10681 }
10682 \def\hyper@anchorend{%
10683   \Hy@activeanchorfalse
10684 }
10685 \newcounter{Hy@AnnotLevel}
10686 \ifHy@ocgcolorlinks
10687   \def\OBJ@OCG@view{@OCG@view}%
10688   \@pdfm@mark{%
10689     obj \OBJ@OCG@view <<%
10690       /Type/OCG%
10691       /Name(View)%
10692       /Usage<<%
10693       /Print<<%
10694       /PrintState/OFF%
10695       >>%
10696       /View<<%
10697       /ViewState/ON%
10698       >>%
10699       >>%
10700       >>%
10701     }%
10702   \@pdfm@mark{close \OBJ@OCG@view}%
10703   \def\OBJ@OCG@print{@OCG@print}%
10704   \@pdfm@mark{%
10705     obj \OBJ@OCG@print <<%
10706       /Type/OCG%
10707       /Name(Print)%
10708       /Usage<<%
10709       /Print<<%
10710       /PrintState/ON%
10711       >>%
10712       /View<<%
10713       /ViewState/OFF%
10714       >>%
10715       >>%
10716       >>%
10717     }%
10718   \@pdfm@mark{close \OBJ@OCG@print}%
10719   \def\OBJ@OCGs{@OCGs}%
10720   \@pdfm@mark{%
10721     obj \OBJ@OCGs [%
10722       \OBJ@OCG@view\space\OBJ@OCG@print
10723     ]%
10724   }%
10725   \@pdfm@mark{close \OBJ@OCGs}%

```

```

10726 \@pdfm@mark{%
10727   put @catalog <<%
10728     /OCProperties<<%
10729     /OCGs \OBJ@OCGs
10730     /D<<%
10731     /OFF[\OBJ@OCG@print]%
10732     /AS[%
10733       <<%
10734         /Event/View%
10735         /OCGs \OBJ@OCGs
10736         /Category[/View]%
10737       >>%
10738       <<%
10739         /Event/Print%
10740         /OCGs \OBJ@OCGs
10741         /Category[/Print]%
10742       >>%
10743       <<%
10744         /Event/Export%
10745         /OCGs \OBJ@OCGs
10746         /Category[/Print]%
10747       >>%
10748     ]%
10749     >>%
10750     >>%
10751     >>%
10752   }%
10753 \@AtBeginShipout{%
10754   \setbox\AtBeginShipoutBox=\hbox{%
10755     \copy\AtBeginShipoutBox
10756     \@pdfm@mark{%
10757       put @resources <<%
10758         /Properties<<%
10759         /OCView \OBJ@OCG@view
10760         /OCPrint \OBJ@OCG@print
10761       >>%
10762       >>%
10763     }%
10764   }%
10765 }%
10766 \Hy@AtBeginDocument{%
10767   \def\Hy@colorlink#1{%
10768     \begingroup
10769     \ifHy@ocgcolorlinks
10770       \def\Hy@ocgcolor{#1}%
10771       \setbox0=\hbox\bgroup\color@begingroup
10772     \else
10773       \HyColor@UseColor#1%
10774     \fi
10775   }%
10776   \def\Hy@endcolorlink{%
10777     \ifHy@ocgcolorlinks
10778       \color@endgroup\egroup
10779     \mbox{%
10780       \@pdfm@mark{content /OC/OCPrint BDC}%
10781       \rlap{\copy0}%
10782       \@pdfm@mark{content EMC/OC/OCView BDC}%

```

```

10783     \begingroup
10784     \expandafter\HyColor@UseColor\Hy@ocgcolor
10785     \box0 %
10786     \endgroup
10787     \@pdfm@mark{content EMC}%
10788   }%
10789   \fi
10790   \endgroup
10791 }%
10792 }%
10793 \else
10794   \Hy@DisableOption{ocgcolorlinks}%
10795 \fi

```

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

```

10796 \def\Hy@BeginAnnot#1{%
10797   \global\advance\c@Hy@AnnotLevel\@ne
10798   \ifnum\c@Hy@AnnotLevel=\@ne
10799     #1%
10800   \fi
10801 }
10802 \def\Hy@endAnnot{%
10803   \ifnum\value{Hy@AnnotLevel}=\@ne
10804     \Hy@endcolorlink
10805     \@pdfm@mark{eann}%
10806   \fi
10807   \global\advance\c@Hy@AnnotLevel\m@ne
10808 }
10809 \def\Hy@undefinedname{UNDEFINED}
10810 \def\hyper@linkstart#1#2{%
10811   \Hy@VerboseLinkStart{#1}{#2}%
10812   \leavevmode
10813   \Hy@BeginAnnot{%
10814     \protected@edef\Hy@testname{#2}%
10815     \ifx\Hy@testname\@empty
10816       \Hy@Warning{%
10817         Empty destination name,\MessageBreak
10818         using '\Hy@undefinedname'%
10819       }%
10820     \let\Hy@testname\Hy@undefinedname
10821   \else
10822     \Hy@pstringdef\Hy@testname{%
10823       \expandafter\HyperDestNameFilter\expandafter{%
10824         \Hy@testname
10825       }%
10826     }%
10827   \fi
10828   \@pdfm@mark{%
10829     bann<<%
10830     /Type/Annot%
10831     /Subtype/Link%
10832     \ifHy@pdfa /F 4\fi
10833     \Hy@setpdfborder
10834     \Hy@setpdfhighlight
10835     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10836     \else

```

```

10837      /C[\csname @#1bordercolor\endcsname]%
10838      \fi
10839      /A<<%
10840      /S/GoTo%
10841      /D(\Hy@testname)%
10842      \Hy@href@nextactionraw
10843      >>%
10844      >>%
10845      }%
10846      \expandafter\Hy@colorlink\csname @#1color\endcsname
10847      }%
10848      }
10849      \def\hyper@linkend{\Hy@EndAnnot}%
10850      \def\hyper@link#1#2#3{%
10851      \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10852      }
10853      \def\hyper@linkfile#1#2#3{%
10854      \leavevmode
10855      \Hy@BeginAnnot{%
10856      \def\Hy@pstringF{#2}%
10857      \Hy@CleanupFile\Hy@pstringF
10858      \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10859      \Hy@pstringdef\Hy@pstringD{#3}%
10860      \Hy@MakeRemoteAction
10861      \@pdfm@mark{%
10862      bann<<%
10863      /Type/Annot%
10864      /Subtype/Link%
10865      \ifHy@pdfa /F 4\fi
10866      \Hy@setpdfborder
10867      \Hy@setpdfhighlight
10868      \ifx\@filebordercolor\relax
10869      \else
10870      /C[\@filebordercolor]%
10871      \fi
10872      /A<<%
10873      /S/GoToR%
10874      /F(\Hy@pstringF)%
10875      /D%
10876      \ifx\#3\%
10877      [\Hy@href@page\@pdfremotestartview]%
10878      \else
10879      (\Hy@pstringD)%
10880      \fi
10881      \Hy@SetNewWindow
10882      \Hy@href@nextactionraw
10883      >>%
10884      >>%
10885      }%
10886      \Hy@colorlink\@filecolor
10887      }%
10888      #1\Hy@xspace@end
10889      \Hy@EndAnnot
10890      }
10891      \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10892      \leavevmode
10893      \Hy@BeginAnnot{%

```

```

10894 \Hy@pstringdef\Hy@pstringF{#1}%
10895 \Hy@pstringdef\Hy@pstringP{#3}%
10896 \@pdfm@mark{%
10897   bann<<%
10898     /Type/Annot%
10899     /Subtype/Link%
10900     \ifHy@pdfa /F 4\fi
10901     \Hy@setpdfborder
10902     \Hy@setpdfhighlight
10903     \ifx\@runbordercolor\relax
10904     \else
10905       /C[\@runbordercolor]%
10906     \fi
10907     /A<<%
10908     /F(\Hy@pstringF)%
10909     /S/Launch%
10910     \Hy@SetNewWindow
10911     \ifx\#3\%
10912     \else
10913       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10914     \fi
10915     \Hy@href@nextactionraw
10916     >>%
10917   >>%
10918 }%
10919 \Hy@colorlink\@runcolor
10920 }%
10921 #2\Hy@xspace@end
10922 \Hy@endAnnot
10923 }
10924 \def\hyper@linkurl#1#2{%
10925   \leavevmode
10926   \Hy@BeginAnnot{%
10927     \Hy@pstringdef\Hy@pstringURI{#2}%
10928     \@pdfm@mark{%
10929       bann<<%
10930         /Type/Annot%
10931         /Subtype/Link%
10932         \ifHy@pdfa /F 4\fi
10933         \Hy@setpdfborder
10934         \Hy@setpdfhighlight
10935         \ifx\@urlbordercolor\relax
10936         \else
10937           /C[\@urlbordercolor]%
10938         \fi
10939         /A<<%
10940         /S/URI%
10941         /URI(\Hy@pstringURI)%
10942         \ifHy@href@ismap
10943         /IsMap true%
10944         \fi
10945         \Hy@href@nextactionraw
10946         >>%
10947       >>%
10948     }%
10949     \Hy@colorlink\@urlcolor
10950   }%

```



```

10951 #1\Hy@xspace@end
10952 \Hy@EndAnnot
10953 }
10954 \def\Acrobatmenu#1#2{%
10955 \Hy@Acrobatmenu{#1}{#2}{%
10956 \Hy@BeginAnnot{%
10957 \EdefEscapeName\Hy@temp@menu{#1}%
10958 \@pdfm@mark{%
10959 bann<<%
10960 /Type/Annot%
10961 /Subtype/Link%
10962 \ifHy@pdfa /F 4\fi
10963 \Hy@setpdfborder
10964 \Hy@setpdfhighlight
10965 \ifx\@menubordercolor\relax
10966 \else
10967 /C[\@menubordercolor]%
10968 \fi
10969 /A<<%
10970 /S/Named%
10971 /N/\Hy@temp@menu
10972 \Hy@href@nextactionraw
10973 >>%
10974 >>%
10975 }%
10976 \Hy@colorlink\@menucolor
10977 }%
10978 #2\Hy@xspace@end
10979 \Hy@EndAnnot
10980 }%
10981 }
10982
10983 \def\PDF@FinishDoc{%
10984 \Hy@UseMaketitleInfos
10985 \Hy@Info@GenerateAddons
10986 \@pdfm@mark{%
10987 docinfo<<%
10988 /Title(\@pdftitle)%
10989 /Subject(\@pdfsubject)%
10990 /Creator(\@pdfcreator)%
10991 \ifx\@pdfcreationdate\@empty
10992 \else
10993 /CreationDate(\@pdfcreationdate)%
10994 \fi
10995 \ifx\@pdfmoddate\@empty
10996 \else
10997 /ModDate(\@pdfmoddate)%
10998 \fi
10999 /Author(\@pdfauthor)%
11000 \ifx\@pdfproducer\relax
11001 \else
11002 /Producer(\@pdfproducer)%
11003 \fi
11004 /Keywords(\@pdfkeywords)%
11005 \ifx\@pdftrapped\@empty
11006 \else
11007 /Trapped/\@pdftrapped

```

```

11008     \fi
11009     \HyInfo@Addons
11010     >>%
11011 }%
11012 \Hy@DisableOption{pdfauthor}%
11013 \Hy@DisableOption{pdftitle}%
11014 \Hy@DisableOption{pdfsubject}%
11015 \Hy@DisableOption{pdfcreator}%
11016 \Hy@DisableOption{addtopdfcreator}%
11017 \Hy@DisableOption{pdfcreationdate}%
11018 \Hy@DisableOption{pdfcreationdate}%
11019 \Hy@DisableOption{pdfmoddate}%
11020 \Hy@DisableOption{pdfproducer}%
11021 \Hy@DisableOption{pdfkeywords}%
11022 \Hy@DisableOption{pdftrapped}%
11023 \Hy@DisableOption{pdfinfo}%
11024 }
11025 \def\PDF@SetupDoc{%
11026   \edef\Hy@temp{%
11027     \ifHy@pdftoolbar\else /HideToolbar true\fi
11028     \ifHy@pdfmenubar\else /HideMenubar true\fi
11029     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11030     \ifHy@pdfwindow /FitWindow true\fi
11031     \ifHy@pdfcenterwindow /CenterWindow true\fi
11032     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11033     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11034     \Hy@UseNameKey{Direction}\@pdfdirection
11035     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11036     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11037     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11038     \Hy@UseNameKey{PrintClip}\@pdfprintclip
11039     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11040     \Hy@UseNameKey{Duplex}\@pdfduplex
11041     \ifx\@pdfpicktraybypdfsize\@empty
11042     \else
11043       /PickTrayByPDFSize \@pdfpicktraybypdfsize
11044     \fi
11045     \ifx\@pdfprintpagerange\@empty
11046     \else
11047       /PrintPageRange[\@pdfprintpagerange]%
11048     \fi
11049     \ifx\@pdfnumcopies\@empty
11050     \else
11051       /NumCopies \@pdfnumcopies
11052     \fi
11053   }%
11054   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11055   \@pdfm@mark{%
11056     docview<<%
11057     \ifx\@pdfstartpage\@empty
11058     \else
11059       \ifx\@pdfstartview\@empty
11060       \else
11061         /OpenAction[<@page\@pdfstartpage\@pdfstartview]%
11062       \fi
11063     \fi
11064     \ifx\@baseurl\@empty

```

```

11065 \else
11066 /URI<</Base(\Hy@pstringB)>>%
11067 \fi
11068 /PageMode/\@pdfpagemode
11069 \ifx\Hy@temp\@empty
11070 \else
11071 /ViewerPreferences<<\Hy@temp>>%
11072 \fi
11073 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11074 \ifx\@pdflang\relax
11075 \else
11076 /Lang(\@pdflang)%
11077 \fi
11078 >>%
11079 }%
11080 \ifx\@pdfpagescrop\@empty
11081 \else
11082 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
11083 \fi
11084 }
11085 </dvipdfm | xetex>
11086 <*dvipdfm | xetex>

```

\hyper@pagetransition

```

11087 \def\hyper@pagetransition{%
11088 \ifx\@pdfpagetransition\relax
11089 \else
11090 \ifx\@pdfpagetransition\@empty
11091 \else
11092 \special{pdf:put @thispage %
11093 <</Trans<</S/\@pdfpagetransition>>>>%
11094 }%
11095 \fi
11096 \fi
11097 }

```

\hyper@pageduration

```

11098 \def\hyper@pageduration{%
11099 \ifx\@pdfpageduration\relax
11100 \else
11101 \ifx\@pdfpageduration\@empty
11102 \else
11103 \special{pdf:put @thispage %
11104 <</Dur \@pdfpageduration>>>%
11105 }%
11106 \fi
11107 \fi
11108 }

```

\hyper@pagehidden

```

11109 \def\hyper@pagehidden{%
11110 \ifHy@useHidKey
11111 \special{pdf:put @thispage %
11112 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11113 }%
11114 \fi
11115 }

```

```

11116 \g@addto@macro\Hy@EveryPageBoxHook{%
11117   \hyper@pagetransition
11118   \hyper@pageduration
11119   \hyper@pagehidden
11120 }
11121 </dvipdfm | xetex>

```

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

```

11122 <{*dvipdfm}
11123 \AtBeginShipoutFirst{%
11124   \ifHy@setpagesize
11125     \begingroup
11126       \ifundefined{stockwidth}{%
11127         \ifdim\paperwidth>\z@
11128           \ifdim\paperheight>\z@
11129             \special{papersize=\the\paperwidth,\the\paperheight}%
11130           \fi
11131         \fi
11132       }{%
11133         \ifdim\stockwidth>\z@
11134           \ifdim\stockheight>\z@
11135             \special{papersize=\the\stockwidth,\the\stockheight}%
11136           \fi
11137         \fi
11138       }%
11139     \endgroup
11140   \fi
11141   \Hy@DisableOption{setpagesize}%
11142 }
11143 </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.

```

11144 <{*vtexhtml}
11145 \providecommand*\XR@ext}{htm}
11146 \RequirePackage{vtexhtml}
11147 \newif\if@Localurl
11148 \let\PDF@FinishDoc\ltx@empty
11149 \def\PDF@SetupDoc{%
11150   \ifx\@baseurl\@empty
11151     \else
11152       \special{!direct <base href="\@baseurl">}%
11153     \fi
11154 }
11155 \def\@urltype{url}
11156 \def\hyper@link#1#2#3{%
11157   \Hy@VerboseLinkStart{#1}{#2}%
11158   \leavevmode
11159   \special{!direct <a href=%
11160     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11161   #3\Hy@xspace@end
11162   \special{!direct </a>}%
11163 }
11164 \def\hyper@linkurl#1#2{%

```

```

11165 \begingroup
11166 \hyper@chars
11167 \leavevmode
11168 \MathBSuppress=1\relax
11169 \special{!direct <a href=%
11170     \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}}%
11171 #1\Hy@xspace@end
11172 \MathBSuppress=0\relax
11173 \special{!direct </a>}}%
11174 \endgroup
11175 }
11176 \def\hyper@linkfile#1#2#3{%
11177 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\##3\fi}%
11178 }
11179 \def\hyper@linkstart#1#2{%
11180 \Hy@VerboseLinkStart{#1}{#2}%
11181 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
11182 \@Localurltrue
11183 \special{!direct <a href=\hyper@quote#2\hyper@quote>}}%
11184 \else
11185 \@Localurloffalse
11186 \begingroup
11187 \hyper@chars
11188 \special{!aref \HyperDestNameFilter{#2}}}%
11189 \endgroup
11190 \fi
11191 }
11192 \def\hyper@linkend{%
11193 \if@Localurl
11194 \special{!endaref}}%
11195 \else
11196 \special{!direct </a>}}%
11197 \fi
11198 }
11199 \Hy@WrapperDef\hyper@anchorstart#1{%
11200 \Hy@SaveLastskip
11201 \Hy@VerboseAnchor{#1}%
11202 \begingroup
11203 \hyper@chars
11204 \special{!aname #1}}%
11205 \special{!direct <a name=%
11206     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
11207 \endgroup
11208 \Hy@activeanchortrue
11209 }
11210 \def\hyper@anchorend{%
11211 \special{!direct </a>}}%
11212 \Hy@activeanchortrue
11213 \Hy@RestoreLastskip
11214 }
11215 \Hy@WrapperDef\hyper@anchor#1{%
11216 \Hy@SaveLastskip
11217 \Hy@VerboseAnchor{#1}%
11218 \begingroup
11219 \let\protect=\string
11220 \hyper@chars
11221 \leavevmode

```

```

11222 \special{!aname #1}%
11223 \special{!direct <a name=%
11224 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11225 \endgroup
11226 \Hy@activeanchortrue
11227 \bgroup\anchor@spot\egroup
11228 \special{!direct </a>}%
11229 \Hy@activeanchorfalse
11230 \Hy@RestoreLastskip
11231 }
11232 \def\@Form[#1]{%
11233 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11234 }
11235 \let\@endForm\ltx@empty
11236 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11237 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11238 }
11239 \def\@TextField[#1]#2{% parameters, label
11240 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11241 }
11242 \def\@CheckBox[#1]#2{% parameters, label
11243 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11244 }
11245 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11246 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11247 }
11248 \def\@PushButton[#1]#2{% parameters, label
11249 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11250 }
11251 \def\@Reset[#1]#2{%
11252 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11253 }
11254 \def\@Submit[#1]#2{%
11255 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11256 }
11257 </vtexhtml>
11258 <*vtx>

```

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.

```

11259 \ifx\mediaheight\@undefined
11260 \else
11261 \ifx\mediaheight\relax
11262 \else
11263 \ifHy@setpagesize
11264 \providecommand*\VTeXInitMediaSize{%
11265 \ltx@ifundefined{stockwidth}{%
11266 \ifdim\paperheight>0pt %
11267 \setlength\mediaheight\paperheight
11268 \fi
11269 \ifdim\paperheight>0pt %
11270 \setlength\mediawidth\paperwidth
11271 \fi
11272 }{%
11273 \ifdim\stockheight>0pt %
11274 \setlength\mediaheight\stockheight

```

```

11275         \fi
11276         \ifdim\stockwidth>0pt %
11277             \setlength\mediawidth\stockwidth
11278         \fi
11279     }%
11280 }%
11281 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11282 \fi
11283 \Hy@DisableOption{setpagesize}%
11284 \fi
11285 \fi

Older versions of VTeX require xyz in lower case.

11286 \providecommand*\@pdfview{xyz}
11287 \providecommand*\@pdfborder{0 0 1}
11288 \providecommand*\@pdfborderstyle{}
11289 \let\CurrentBorderColor\@linkbordercolor
11290 \Hy@WrapperDef\hyper@anchor#1{%
11291     \Hy@SaveLastskip
11292     \Hy@VerboseAnchor{#1}%
11293     \begingroup
11294         \let\protect=\string
11295         \hyper@chars
11296         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11297     \endgroup
11298     \Hy@activeanchortrue
11299     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11300     \Hy@activeanchorfalse
11301     \Hy@RestoreLastskip
11302 }
11303 \Hy@WrapperDef\hyper@anchorstart#1{%
11304     \Hy@SaveLastskip
11305     \Hy@VerboseAnchor{#1}%
11306     \begingroup
11307         \hyper@chars
11308         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11309     \endgroup
11310     \Hy@activeanchortrue
11311 }
11312 \def\hyper@anchorend{%
11313     \Hy@activeanchorfalse
11314     \Hy@RestoreLastskip
11315 }
11316 \def\@urltype{url}
11317 \def\Hy@undefinedname{UNDEFINED}
11318 \def\hyper@linkstart#1#2{%
11319     \Hy@VerboseLinkStart{#1}{#2}%
11320     \Hy@pstringdef\Hy@pstringURI{#2}%
11321     \expandafter\Hy@colorlink\csname @#1color\endcsname
11322     \ltx@ifundefined{@#1bordercolor}{%
11323         \let\CurrentBorderColor\relax
11324     }{%
11325         \edef\CurrentBorderColor{%
11326             \csname @#1bordercolor\endcsname
11327         }%
11328     }%
11329     \def\Hy@tempa{#1}%
11330     \ifx\Hy@tempa\@urltype

```

```

11331 \special{!%
11332   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11333   \ifHy@href@ismap
11334     /IsMap true%
11335   \fi
11336   \Hy@href@nextactionraw
11337   >,%
11338   a=<%
11339   \ifHy@pdfa /F 4\fi
11340   \Hy@setpdfborder
11341   \ifx\CurrentBorderColor\relax
11342   \else
11343     /C [\CurrentBorderColor]%
11344   \fi
11345   >%
11346   }%
11347 \else
11348   \protected@edef\Hy@testname{#2}%
11349   \ifx\Hy@testname\@empty
11350     \Hy@Warning{%
11351       Empty destination name,\MessageBreak
11352       using ` \Hy@undefinedname'%
11353     }%
11354     \let\Hy@testname\Hy@undefinedname
11355   \fi
11356   \special{!%
11357     aref \expandafter\HyperDestNameFilter
11358     \expandafter{\Hy@testname};%
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   \fi
11369 }
11370 \def\hyper@linkend{%
11371   \special{!endaref}%
11372   \Hy@endcolorlink
11373 }
11374 \def\hyper@linkfile#1#2#3{%
11375   \leavevmode
11376   \def\Hy@pstringF{#2}%
11377   \Hy@CleanupFile\Hy@pstringF
11378   \special{!%
11379     aref <%
11380     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11381     f=\Hy@pstringF>#3;%
11382     a=<%
11383     \ifHy@pdfa /F 4\fi
11384     \Hy@setpdfborder
11385     \ifx\@filebordercolor\relax
11386     \else
11387       /C [\@filebordercolor]%

```



```

11388 \fi
11389 >%
11390 }%
11391 \Hy@colorlink\@filecolor
11392 #1\Hy@xspace@end
11393 \Hy@endcolorlink
11394 \special{!endaref}%
11395 }
11396 \def\hyper@linkurl#1#2{%
11397 \begingroup
11398 \Hy@pstringdef\Hy@pstringURI{#2}%
11399 \hyper@chars
11400 \leavevmode
11401 \special{!%
11402 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11403 \ifHy@href@ismap
11404 /IsMap true%
11405 \fi
11406 \Hy@href@nextactionraw
11407 >;%
11408 a=<%
11409 \ifHy@pdfa /F 4\fi
11410 \Hy@setpdfborder
11411 \ifx\@urlbordercolor\relax
11412 \else
11413 /C [\@urlbordercolor]%
11414 \fi
11415 >%
11416 }%
11417 \Hy@colorlink\@urlcolor
11418 #1\Hy@xspace@end
11419 \Hy@endcolorlink
11420 \special{!endaref}%
11421 \endgroup
11422 }
11423 \def\hyper@link#1#2#3{%
11424 \Hy@VerboseLinkStart{#1}{#2}%
11425 \ltx@ifundefined{@#1bordercolor}{%
11426 \let\CurrentBorderColor\relax
11427 }{%
11428 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11429 }%
11430 \leavevmode
11431 \protected@edef\Hy@testname{#2}%
11432 \ifx\Hy@testname\@empty
11433 \Hy@Warning{%
11434 Empty destination name,\MessageBreak
11435 using ``\Hy@undefinedname'%
11436 }%
11437 \let\Hy@testname\Hy@undefinedname
11438 \fi
11439 \special{!%
11440 aref \expandafter\HyperDestNameFilter
11441 \expandafter{\Hy@testname};%
11442 a=<%
11443 \ifHy@pdfa /F 4\fi
11444 \Hy@setpdfborder

```

```

11445 \ifx\CurrentBorderColor\relax
11446 \else
11447 /C [\CurrentBorderColor]%
11448 \fi
11449 >%
11450 }%
11451 \expandafter
11452 \Hy@colorlink\csname @#1color\endcsname
11453 #3\Hy@xspace@end
11454 \Hy@endcolorlink
11455 \special{!endaref}%
11456 }
11457 \def\hyper@image#1#2{%
11458 \hyper@linkurl{#2}{#1}%
11459 }
11460 \def\@hyper@launch run:#1\#2#3{%
11461 \Hy@pstringdef\Hy@pstringF{#1}%
11462 \Hy@pstringdef\Hy@pstringP{#3}%
11463 \leavevmode
11464 \special{!aref %
11465 <u=%
11466 /Type/Action%
11467 /S/Launch%
11468 /F(\Hy@pstringF)%
11469 \Hy@SetNewWindow
11470 \ifx\#3\%
11471 \else
11472 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11473 \fi
11474 \Hy@href@nextactionraw
11475 >,%
11476 a=<%
11477 \ifHy@pdfa /F 4\fi
11478 \Hy@setpdfborder
11479 \ifx\@runbordercolor\relax
11480 \else
11481 /C[\@runbordercolor]%
11482 \fi
11483 >%
11484 }%
11485 \Hy@colorlink\@runcolor
11486 #2\Hy@xspace@end
11487 \Hy@endcolorlink
11488 \special{!endaref}%
11489 }
11490 \def\Acrobatmenu#1#2{%
11491 \EdefEscapeName\Hy@temp@menu{#1}%
11492 \Hy@Acrobatmenu{#1}{#2}{%
11493 \special{!%
11494 aref <u=/S /Named /N /\Hy@temp@menu>;%
11495 a=<%
11496 \ifHy@pdfa /F 4\fi
11497 \Hy@setpdfborder
11498 \ifx\@menubordercolor\relax
11499 \else
11500 /C[\@menubordercolor]%
11501 \fi

```

```

11502 >%
11503 }%
11504 \Hy@colorlink\@menucolor
11505 #2\Hy@xspace@end
11506 \Hy@endcolorlink
11507 \special{!endaref}%
11508 }%
11509 }

```

The following code (transition effects) is made by Alex Kostin.
The code below makes sense for \TeX 7.02 or later.

Please never use `\@ifundefined{VTeXversion}{..}{..}` *globally*.

```

11510 \ifnum\Hy@VTeXversion<702 %
11511 \else
11512 \def\hyper@pagetransition{%
11513 \ifx\@pdfpagetransition\relax
11514 \else
11515 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

11516 \else
11517 \hvtex@parse@trans\@pdfpagetransition
11518 \fi
11519 \fi
11520 }%

```

I have to write an “honest” parser to convert raw PDF code into \TeX `\special`.
(AVK)

Syntax of \TeX `\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:

```

11521 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11522 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11523 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11524 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11525 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11526 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11527 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

11528 \def\hvtex@par@dimension{/Dm}%
11529 \def\hvtex@par@direction{/Di}%

```

```

11530 \def\hvtex@par@duration{/D}%
11531 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

11532 \def\hvtex@gettoken{%
11533   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11534 }%

```

Notice that tokens in the input buffer must be space delimited.

```

11535 \def\hvtex@gettoken@#1 #2\@nil{%
11536   \edef\hvtex@token{#1}%
11537   \edef\hvtex@buffer{#2}%
11538 }%
11539 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

11540 \let\hvtex@trans@code\@empty
11541 \let\hvtex@param@dimension\@empty
11542 \let\hvtex@param@direction\@empty
11543 \let\hvtex@param@duration\@empty
11544 \let\hvtex@param@motion\@empty
11545 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

11546 \hvtex@gettoken
11547 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

11548   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

11549   \else
11550     \hvtex@gettoken
11551   \fi
11552 \fi
11553 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11554 \hvtex@trans@params
11555 }%

```

Reentrant macro to parse optional parameters.

```

11556 \def\hvtex@trans@params{%
11557   \ifx\hvtex@buffer\@empty
11558   \else
11559     \hvtex@gettoken
11560     \let\hvtex@trans@par\hvtex@token
11561     \ifx\hvtex@buffer\@empty
11562     \else
11563       \hvtex@gettoken
11564       \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_T_EX special takes it in milliseconds.

```

11565       \let\hvtex@param@duration\hvtex@token
11566       \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

11567       \expandafter\edef\expandafter\hvtex@param@motion
11568       \expandafter{\expandafter\@gobble\hvtex@token}%
11569       \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

11570      \expandafter\edef\expandafter\hvtex@param@dimension
11571      \expandafter{\expandafter\@gobble\hvtex@token}%
11572      \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).

```

11573      \let\hvtex@param@direction\hvtex@token
11574      \fi\fi\fi\fi
11575      \fi
11576      \fi
11577      \ifx\hvtex@buffer\@empty
11578      \let\next\hvtex@produce@trans
11579      \else
11580      \let\next\hvtex@trans@params
11581      \fi
11582      \next
11583  }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

11584 \def\hvtex@produce@trans{%
11585   \let\vtex@trans@special\@empty
11586   \if S\hvtex@trans@code
11587     \edef\vtex@trans@special{\hvtex@trans@code
11588       \hvtex@param@dimension\hvtex@param@motion}%
11589   \else\if B\hvtex@trans@code
11590     \edef\vtex@trans@special{%
11591       \hvtex@trans@code\hvtex@param@dimension
11592     }%
11593   \else\if X\hvtex@trans@code
11594     \edef\vtex@trans@special{%
11595       \hvtex@trans@code\hvtex@param@motion
11596     }%
11597   \else\if W\hvtex@trans@code
11598     \edef\vtex@trans@special{%
11599       \hvtex@trans@code\hvtex@param@direction
11600     }%
11601   \else\if D\hvtex@trans@code
11602     \let\vtex@trans@special\hvtex@trans@code
11603   \else\if R\hvtex@trans@code
11604     \let\vtex@trans@special\hvtex@trans@code
11605   \else\if G\hvtex@trans@code
11606     \edef\vtex@trans@special{%
11607       \hvtex@trans@code\hvtex@param@direction
11608     }%
11609   \fi\fi\fi\fi\fi\fi
11610   \ifx\vtex@trans@special\@empty
11611   \else
11612     \ifx\hvtex@param@duration\@empty
11613     \else
11614       \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11615     \multiply\dimen@\@m
11616     \edef\vtex@trans@special{%
11617       \vtex@trans@special,\strip@pt\dimen@
11618     }%

```

```

11619 \fi
      And all the mess is just for this.
11620 \special{!trans \vTeX@trans@special}%
11621 \fi
11622 }%

11623 \def\hyper@pageduration{%
11624 \ifx\@pdfpageduration\relax
11625 \else
11626 \ifx\@pdfpageduration\@empty
11627 \special{!duration-}%
11628 \else
11629 \special{!duration \@pdfpageduration}%
11630 \fi
11631 \fi
11632 }%
11633 \def\hyper@pagehidden{%
11634 \ifHy@useHidKey
11635 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11636 \fi
11637 }%
11638 \g@addto@macro\Hy@EveryPageBoxHook{%
11639 \hyper@pagetransition
11640 \hyper@pageduration
11641 \hyper@pagehidden
11642 }%
11643 \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

```

11644 \ifx\@pdfproducer\relax
11645 \def\@pdfproducer{VTeX}%
11646 \ifnum\Hy@VTeXversion>\z@
11647 \count@\VTeXversion
11648 \divide\count@ 100 %
11649 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11650 \multiply\count@ -100 %
11651 \advance\count@\VTeXversion
11652 \edef\@pdfproducer{%
11653 \@pdfproducer
11654 .\ifnum\count@<10 0\fi\the\count@
11655 \ifx\VTeXOS\@undefined\else
11656 \ifnum\VTeXOS>0 %
11657 \ifnum\VTeXOS<6 %
11658 \space(
11659 \ifcase\VTeXOS
11660 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11661 \fi
11662 )%

```

```

11663     \fi
11664     \fi
11665     \fi
11666     ,\space
11667     \ifnum\OpMode=\@ne PDF\else PS\fi
11668     \space backend%
11669     \ifx\gexmode\@undefined\else
11670     \ifnum\gexmode>\z@\space with GeX\fi
11671     \fi
11672 }%
11673 \fi
11674 \fi

```

Current `!pdfinfo` key syntax:

| Key | Field | Type |
|----------|----------------------------------|--------|
| a | A uthor | String |
| b | C rop B ox | String |
| c | C reator | String |
| k | K eywords | String |
| l | P age L ayout | PS |
| p | P age M ode | PS |
| r | P roducer | String |
| s | S ubject | String |
| t | T itle | String |
| u | U RI | PS |
| v | V iew P references | PS |

Note: PS objects that are dicts are in `<<...>>` (yuck; no choice).

```

11675 \def\PDF@SetupDoc{%
11676   \ifx\@pdfpagescrop\@empty
11677   \else
11678   \special{!pdfinfo b=<\@pdfpagescrop>}%
11679   \fi
11680   \ifx\@pdfstartpage\@empty
11681   \else
11682   \ifx\@pdfstartview\@empty
11683   \else
11684   \special{!onopen Page\@pdfstartpage}%
11685   \fi
11686   \fi
11687   \special{!pdfinfo p=</\@pdfpagemode>}%
11688   \ifx\@baseurl\@empty
11689   \else
11690   \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11691   \fi
11692   \special{!pdfinfo v=<<<%
11693     \ifHy@pdftoolbar\else /HideToolbar true\fi
11694     \ifHy@pdfmenubar\else /HideMenubar true\fi
11695     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11696     \ifHy@pdffitwindow /FitWindow true\fi
11697     \ifHy@pdfcenterwindow /CenterWindow true\fi
11698     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11699     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11700     \Hy@UseNameKey{Direction}\@pdfdirection
11701     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11702     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11703     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11704     \Hy@UseNameKey{PrintClip}\@pdfprintclip

```

```

11705 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11706 \Hy@UseNameKey{Duplex}\@pdfduplex
11707 \ifx\@pdfpicktraybypdfsize\@empty
11708 \else
11709 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11710 \fi
11711 \ifx\@pdfprintpagerange\@empty
11712 \else
11713 /PrintPageRange[\@pdfprintpagerange]%
11714 \fi
11715 \ifx\@pdfnumcopies\@empty
11716 \else
11717 /NumCopies \@pdfnumcopies
11718 \fi
11719 >>>}%
11720 \ifx\@pdfpagelayout\@empty
11721 \else
11722 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11723 \fi
11724 }%
11725 \HyInfo@AddonUnsupportedtrue
11726 \define@key{Hyp}{pdfcreationdate}{%
11727 \Hy@Warning{%
11728 VTeX does not support pdfcreationdate.\MessageBreak
11729 Therefore its setting is ignored%
11730 }%
11731 }
11732 \define@key{Hyp}{pdfmoddate}{%
11733 \Hy@Warning{%
11734 VTeX does not support pdfmoddate.\MessageBreak
11735 Therefore its setting is ignored%
11736 }%
11737 }
11738 \def\PDF@FinishDoc{%
11739 \Hy@UseMaketitleInfos
11740 \HyInfo@TrappedUnsupported
11741 \special{!pdfinfo a=<\@pdfauthor>}%
11742 \special{!pdfinfo t=<\@pdftitle>}%
11743 \special{!pdfinfo s=<\@pdfsubject>}%
11744 \special{!pdfinfo c=<\@pdfcreator>}%
11745 \ifx\@pdfproducer\relax
11746 \else
11747 \special{!pdfinfo r=<\@pdfproducer>}%
11748 \fi
11749 \special{!pdfinfo k=<\@pdfkeywords>}%
11750 \Hy@DisableOption{pdfauthor}%
11751 \Hy@DisableOption{pdftitle}%
11752 \Hy@DisableOption{pdfsubject}%
11753 \Hy@DisableOption{pdfcreator}%
11754 \Hy@DisableOption{addtopdfcreator}%
11755 \Hy@DisableOption{pdfcreationdate}%
11756 \Hy@DisableOption{pdfcreationdate}%
11757 \Hy@DisableOption{pdfmoddate}%
11758 \Hy@DisableOption{pdfproducer}%
11759 \Hy@DisableOption{pdfkeywords}%
11760 \Hy@DisableOption{pdftrapped}%
11761 \Hy@DisableOption{pdfinfo}%

```



```

11762 }
11763 </vtx>

```

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.

```

11764 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11765 <package>\providecommand*{\Hy@DistillerDestFix}{}
11766 <*pdfmark | dviwindo>
11767 \def\Hy@DistillerDestFix{%
11768   \begingroup
11769   \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11770   \ifnum \@ifundefined{OpMode}{0}{}%
11771     \@ifundefined{gexmode}{0}{}%
11772     \ifnum\gexmode>0 \OpMode\else 0\fi
11773   }>1 %
11774   \def\x##1{%
11775     \immediate\special{!=##1}%
11776   }%
11777   \fi
11778   \x{%
11779     /product where{%
11780       pop %
11781       product(Distiller)search{%
11782         pop pop pop %
11783         version(.)search{%
11784           exch pop exch pop%
11785           (3011)eq{%
11786             gsave %
11787             newpath 0 0 moveto closepath clip%
11788             /Courier findfont 10 scalefont setfont %
11789             72 72 moveto(.)show %
11790             grestore%
11791           }if%
11792           }{pop}ifelse%
11793           }{pop}ifelse%
11794         }if%
11795       }%
11796     \endgroup
11797   }
11798 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

Drivers that load pdfmark.def have to provide the correct macro definitions of

| | |
|-----------------------------|--|
| <code>\@pdfproducer</code> | for document information |
| <code>\literalps@out</code> | PostScript output |
| <code>\headerps@out</code> | PostScript output that goes in the header area |

and the correct definitions of the following PostScript procedures:

| | |
|--------|--|
| 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 |

```

11799 (*pdfmark)
11800 \Hy@breaklinks@unsupported
11801 \def\HyPat@ObjRef{%
11802   \[~{}]+\}%
11803 }
11804 \Hy@WrapperDef\hyper@anchor#1{%
11805   \Hy@SaveLastskip
11806   \Hy@VerboseAnchor{#1}%
11807   \begingroup
11808     \pdfmark[\anchor@spot]{%
11809       pdfmark=/DEST,%
11810       linktype=anchor,%
11811       View=/\@pdfview \@pdfviewparams,%
11812       DestAnchor={#1}%
11813     }%
11814   \endgroup
11815   \Hy@RestoreLastskip
11816 }
11817 \ltx@ifundefined{hyper@anchorstart}{\endinput}{}
11818 \Hy@WrapperDef\hyper@anchorstart#1{%
11819   \Hy@SaveLastskip
11820   \Hy@VerboseAnchor{#1}%
11821   \literalps@out{H.S}%
11822   \Hy@AllowHyphens
11823   \xdef\hyper@currentanchor{#1}%
11824   \Hy@activeanchortrue
11825 }
11826 \def\hyper@anchorend{%
11827   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11828   \pdfmark{%
11829     pdfmark=/DEST,%
11830     linktype=anchor,%
11831     View=/\@pdfview \@pdfviewparams,%
11832     DestAnchor=\hyper@currentanchor,%
11833   }%
11834   \Hy@activeanchorfalse
11835   \Hy@RestoreLastskip
11836 }
11837 \def\hyper@linkstart#1#2{%
11838   \Hy@VerboseLinkStart{#1}{#2}%
11839   \ifHy@breaklinks
11840     \else
11841       \leavevmode
11842       \ifmmode
11843         \def\Hy@LinkMath{$}%
11844       \else

```

```

11845 \let\Hy@LinkMath\ltx@empty
11846 \fi
11847 \Hy@SaveSpaceFactor
11848 \hbox\bgroup
11849 \Hy@RestoreSpaceFactor
11850 \Hy@LinkMath
11851 \fi
11852 \expandafter\Hy@colorlink\csname @#1color\endcsname
11853 \literalps@out{H.S}%
11854 \Hy@AllowHyphens
11855 \xdef\hyper@currentanchor{#2}%
11856 \gdef\hyper@currentlinktype{#1}%
11857 }
11858 \def\hyper@linkend{%
11859 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11860 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11861 \let\Hy@tempcolor\relax
11862 }{%
11863 \edef\Hy@tempcolor{%
11864 \csname @\hyper@currentlinktype bordercolor\endcsname
11865 }%
11866 }%
11867 \pdfmark{%
11868 pdfmark=/ANN,%
11869 linktype=link,%
11870 Subtype=/Link,%
11871 PDFAFlags=4,%
11872 Dest=\hyper@currentanchor,%
11873 AcroHighlight=\@pdfhighlight,%
11874 Border=\@pdfborder,%
11875 BorderStyle=\@pdfborderstyle,%
11876 Color=\Hy@tempcolor,%
11877 Raw=H.B%
11878 }%
11879 \Hy@endcolorlink
11880 \ifHy@breaklinks
11881 \else
11882 \Hy@LinkMath
11883 \Hy@SaveSpaceFactor
11884 \egroup
11885 \Hy@RestoreSpaceFactor
11886 \fi
11887 }

```

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.

```

11888 \begingroup
11889 \catcode`P=12 %
11890 \catcode`T=12 %
11891 \lowercase{\endgroup
11892 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11893 }
11894 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11895 \def\hyper@pagetransition{%

```

```

11896 \ifx\@pdfpagetransition\relax
11897 \else
11898 \ifx\@pdfpagetransition\@empty
11899 % 1. Does an old entry have to be deleted?
11900 % 2. If 1=yes, how to delete?
11901 \else
11902 \pdfmark{%
11903 pdfmark=/PUT,%
11904 Raw={%
11905 \string{ThisPage\string}%
11906 <</Trans << /S /\@pdfpagetransition\space >> >>%
11907 }%
11908 }%
11909 \fi
11910 \fi
11911 }

```

\hyper@pageduration

```

11912 \def\hyper@pageduration{%
11913 \ifx\@pdfpageduration\relax
11914 \else
11915 \ifx\@pdfpageduration\@empty
11916 % 1. Does an old entry have to be deleted?
11917 % 2. If 1=yes, how to delete?
11918 \else
11919 \pdfmark{%
11920 pdfmark=/PUT,%
11921 Raw={%
11922 \string{ThisPage\string}%
11923 <</Dur \@pdfpageduration>>%
11924 }%
11925 }%
11926 \fi
11927 \fi
11928 }

```

\hyper@pagehidden

```

11929 \def\hyper@pagehidden{%
11930 \ifHy@useHidKey
11931 \pdfmark{%
11932 pdfmark=/PUT,%
11933 Raw={%
11934 \string{ThisPage\string}%
11935 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11936 }%
11937 }%
11938 \fi
11939 }

11940 \g@addto@macro\Hy@EveryPageBoxHook{%
11941 \hyper@pagetransition
11942 \hyper@pageduration
11943 \hyper@pagehidden
11944 }

11945 \def\hyper@image#1#2{%
11946 \hyper@linkurl{#2}{#1}%
11947 }

```

```

11948 \def\Hy@undefinedname{UNDEFINED}
11949 \def\hyper@link#1#2#3{%
11950   \Hy@VerboseLinkStart{#1}{#2}%
11951   \ltx@ifundefined{#1bordercolor}{%
11952     \let\Hy@tempcolor\relax
11953   }{%
11954     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11955   }%
11956   \begingroup
11957     \protected@edef\Hy@testname{#2}%
11958     \ifx\Hy@testname\@empty
11959       \Hy@Warning{%
11960         Empty destination name,\MessageBreak
11961         using '\Hy@undefinedname'%
11962       }%
11963       \let\Hy@testname\Hy@undefinedname
11964     \fi
11965     \pdfmark[{#3}]{%
11966       Color=\Hy@tempcolor,%
11967       linktype={#1},%
11968       AcroHighlight=\@pdfhighlight,%
11969       Border=\@pdfborder,%
11970       BorderStyle=\@pdfborderstyle,%
11971       pdfmark=/ANN,%
11972       Subtype=/Link,%
11973       PDFAFlags=4,%
11974       Dest=\Hy@testname
11975     }%
11976   \endgroup
11977 }
11978 \newtoks\pdf@docset
11979 \def\PDF@FinishDoc{%
11980   \Hy@UseMaketitleInfos
11981   \Hy@Info@GenerateAddons
11982   \let\Hy@temp\@empty
11983   \ifx\@pdfcreationdate\@empty
11984   \else
11985     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11986   \fi
11987   \ifx\@pdfmoddate\@empty
11988   \else
11989     \expandafter\def\expandafter\Hy@temp\expandafter{%
11990       \Hy@temp
11991       ModDate=\@pdfmoddate,%
11992     }%
11993   \fi
11994   \ifx\@pdfproducer\relax
11995   \else
11996     \expandafter\def\expandafter\Hy@temp\expandafter{%
11997       \Hy@temp
11998       Producer=\@pdfproducer,%
11999     }%
12000   \fi
12001   \expandafter
12002   \pdfmark\expandafter{%
12003     \Hy@temp
12004     pdfmark=/DOCINFO,%

```

```

12005 Title=\@pdftitle,%
12006 Subject=\@pdfsubject,%
12007 Creator=\@pdfcreator,%
12008 Author=\@pdfauthor,%
12009 Keywords=\@pdfkeywords,%
12010 Trapped=\@pdftrapped
12011 }%
12012 \ifx\HyInfo@Addons\@empty
12013 \else
12014 \pdfmark{%
12015 pdfmark=/DOCINFO,%
12016 Raw={\HyInfo@Addons}%
12017 }%
12018 \fi
12019 \Hy@DisableOption{pdfauthor}%
12020 \Hy@DisableOption{pdftitle}%
12021 \Hy@DisableOption{pdfsubject}%
12022 \Hy@DisableOption{pdfcreator}%
12023 \Hy@DisableOption{addtopdfcreator}%
12024 \Hy@DisableOption{pdfcreationdate}%
12025 \Hy@DisableOption{pdfcreationdate}%
12026 \Hy@DisableOption{pdfmoddate}%
12027 \Hy@DisableOption{pdfproducer}%
12028 \Hy@DisableOption{pdfkeywords}%
12029 \Hy@DisableOption{pdftrapped}%
12030 \Hy@DisableOption{pdfinfo}%
12031 }
12032 \def\PDF@SetupDoc{%
12033 \def\Hy@temp{}%
12034 \ifx\@pdfstartpage\@empty
12035 \else
12036 \ifx\@pdfstartview\@empty
12037 \else
12038 \edef\Hy@temp{%
12039 ,Page=\@pdfstartpage
12040 ,View=\@pdfstartview
12041 }%
12042 \fi
12043 \fi
12044 \edef\Hy@temp{%
12045 \noexpand\pdfmark{%
12046 pdfmark=/DOCVIEW,%
12047 PageMode=/\@pdfpagemode
12048 \Hy@temp
12049 }%
12050 }%
12051 \Hy@temp
12052 \ifx\@pdfpagescrop\@empty
12053 \else
12054 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12055 \fi
12056 \edef\Hy@temp{%
12057 \ifHy@pdftoolbar\else /HideToolbar true\fi
12058 \ifHy@pdfmenubar\else /HideMenubar true\fi
12059 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12060 \ifHy@pdfwindow /FitWindow true\fi
12061 \ifHy@pdfcenterwindow /CenterWindow true\fi

```

```

12062 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12063 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12064 \Hy@UseNameKey{Direction}\@pdfdirection
12065 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12066 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12067 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12068 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12069 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12070 \Hy@UseNameKey{Duplex}\@pdfduplex
12071 \ifx\@pdfpicktraybypdfsize\@empty
12072 \else
12073 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12074 \fi
12075 \ifx\@pdfprintpagerange\@empty
12076 \else
12077 /PrintPageRange[\@pdfprintpagerange]%
12078 \fi
12079 \ifx\@pdfnumcopies\@empty
12080 \else
12081 /NumCopies \@pdfnumcopies
12082 \fi
12083 }%
12084 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12085 \pdfmark{%
12086 pdfmark=/PUT,%
12087 Raw={%
12088 \string{Catalog\string}<<%
12089 \ifx\Hy@temp\@empty
12090 \else
12091 /ViewerPreferences<<\Hy@temp>>%
12092 \fi
12093 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12094 \ifx\@pdflang\relax
12095 \else
12096 /Lang(\@pdflang)%
12097 \fi
12098 \ifx\@baseurl\@empty
12099 \else
12100 /URI<</Base(\Hy@pstringB)>>%
12101 \fi
12102 >>%
12103 }%
12104 }%
12105 }
12106 \pdfmark>
12107 \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.

```

12108 \newif\ifHy@pdfmarkerror
12109 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
12110 \def\pdfmark@[#1]#2{%
12111 \Hy@pdfmarkerrorfalse

```

```

12112 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12113 \@processme
12114 \let\pdf@type\relax
12115 \let\pdf@objdef\ltx@empty
12116 \kvsetkeys{PDF}{#2}%
12117 \ifHy@pdfmarkerror
12118 \else
12119 \ifx\pdf@type\relax
12120 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12121 \ifx\#1\%
12122 \else
12123 \pdf@rect{#1}%
12124 \fi
12125 \else
12126 \ifx\#1\%
12127 \literalps@out{%
12128 [%
12129 \ifx\pdf@objdef\ltx@empty
12130 \else
12131 /_objdef\string{\pdf@objdef\string}%
12132 \fi
12133 \the\pdf@toks\space\pdf@type\space pdfmark%
12134 }%
12135 \else
12136 \ltx@ifundefined{@\pdf@linktype color}{%
12137 \Hy@colorlink\@linkcolor
12138 }{%
12139 \expandafter\Hy@colorlink
12140 \csname @\pdf@linktype color\endcsname
12141 }%
12142 \pdf@rect{#1}%
12143 \literalps@out{%
12144 [%
12145 \ifx\pdf@objdef\ltx@empty
12146 \else
12147 /_objdef\string{\pdf@objdef\string}%
12148 \fi
12149 \the\pdf@toks\space\pdf@type\space pdfmark%
12150 }%
12151 \Hy@endcolorlink
12152 \fi
12153 \fi
12154 \fi
12155 }

```

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}

```



```

12156 \newsavebox{\pdf@box}
12157 \providecommand*{\Hy@setouterhbox}{\sbox}
12158 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
12159 \def\Hy@DEST{/DEST}
12160 \def\pdf@rect#1{%
12161   \begingroup
12162     \chardef\x=1 %
12163     \def\Hy@temp{#1}%
12164     \ifx\Hy@temp\ltx@empty
12165       \chardef\x=0 %
12166     \else
12167       \def\y{\anchor@spot}%
12168       \ifx\Hy@temp\y
12169         \def\y{\relax}%
12170       \ifx\anchor@spot\y
12171         \chardef\x=0 %
12172       \fi
12173     \fi
12174   \fi
12175 \expandafter\endgroup
12176 \ifcase\x
12177   \literalps@out{H.S}%
12178   \literalps@out{H.R}%
12179 \else
12180   \leavevmode
12181   \Hy@SaveSpaceFactor
12182   \ifmmode
12183     \def\Hy@LinkMath{$}%
12184   \else
12185     \let\Hy@LinkMath\ltx@empty
12186   \fi
12187   \ifHy@breaklinks
12188     \Hy@setouterhbox\pdf@box{%
12189       \Hy@RestoreSpaceFactor
12190       \Hy@LinkMath
12191       \Hy@AllowHyphens#1\Hy@xspace@end
12192       \Hy@LinkMath
12193       \Hy@SaveSpaceFactor
12194     }%
12195   \else
12196     \sbox\pdf@box{%
12197       \Hy@RestoreSpaceFactor
12198       \Hy@LinkMath
12199       #1\Hy@xspace@end
12200       \Hy@LinkMath
12201       \Hy@SaveSpaceFactor
12202     }%
12203   \fi
12204   \dimen@ht\pdf@box
12205   \ifdim\dp\pdf@box=\z@
12206     \literalps@out{H.S}%
12207   \else
12208     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12209   \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...).

```

12210   \ifHy@breaklinks

```

```

12211 \ifhmode
12212 \Hy@breaklinksunhbox\pdf@box
12213 \else
12214 \box\pdf@box
12215 \fi
12216 \else
12217 \expandafter\box\pdf@box
12218 \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

12219 \ifdim\dimen@=\z@
12220 \literalps@out{H.R}%
12221 \else
12222 \raise\dimen@ \hbox{\literalps@out{H.R}}%
12223 \fi
12224 \Hy@RestoreSpaceFactor
12225 \fi
12226 \ifx\pdf@type\Hy@DEST
12227 \else
12228 \pdf@addtoksx{H.B}%
12229 \fi
12230 }

```

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.

```

12231 \newtoks\pdf@toks
12232 \newtoks\pdf@defaulttoks
12233 \pdf@defaulttoks={}
12234 \def\pdf@addtoks#1#2{%
12235 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12236 \@processme
12237 }
12238 \def\pdf@addtoksx#1{%
12239 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12240 \@processme
12241 }
12242 \def\PDFdefaults#1{%
12243 \pdf@defaulttoks={#1}%
12244 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

12245 % what is the type of pdfmark?
12246 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12247 % what is the link type?
12248 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12249 \def\pdf@linktype{link}
12250 % named object?
12251 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12252 \let\pdf@objdef\ltx@empty
12253 % parameter is a stream of PDF
12254 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12255 % parameter is a name
12256 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}

```

```

12257 % parameter is a array
12258 \define@key{PDF}{Border}{%
12259   \edef\Hy@temp{#1}%
12260   \ifx\Hy@temp\@empty
12261     \else
12262       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12263     \fi
12264 }
12265 \let\Hy@BorderArrayPatch\@empty
12266 % parameter is a dictionary
12267 \define@key{PDF}{BorderStyle}{%
12268   \edef\Hy@temp{#1}%
12269   \ifx\Hy@temp\@empty
12270     \else
12271       \pdf@addtoks{<<#1>>}{BS}%
12272     \fi
12273 }
12274 % parameter is a array
12275 \define@key{PDF}{Color}{%
12276   \ifx\relax#1\relax
12277     \else
12278       \pdf@addtoks{[#1]}{Color}% hash-ok
12279     \fi
12280 }
12281 % parameter is a string
12282 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12283 % parameter is a integer
12284 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12285 % parameter is a array
12286 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12287 % parameter is a string
12288 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12289 % parameter is a string or file
12290 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12291 % parameter is a destination
12292 \define@key{PDF}{Dest}{%
12293   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12294   \ifx\Hy@pstringDest\@empty
12295     \Hy@pdfmarkerrortrue
12296     \Hy@Warning{Destination with empty name ignored}%
12297   \else
12298     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12299   \fi
12300 }
12301 \define@key{PDF}{DestAnchor}{%
12302   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12303   \ifx\Hy@pstringDest\@empty
12304     \Hy@pdfmarkerrortrue
12305     \Hy@Warning{Destination with empty name ignored}%
12306   \else
12307     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12308   \fi
12309 }
12310 % parameter is a string
12311 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12312 % parameter is a string
12313 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}

```

```

12314 % parameter is a int
12315 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12316 \define@key{PDF}{PDFAFlags}{%
12317   \ifHy@pdfa
12318     \pdf@addtoks{#1}{F}%
12319   \fi
12320 }
12321 % parameter is a name
12322 \define@key{PDF}{AcroHighlight}{%
12323   \begingroup
12324     \edef\x{#1}%
12325     \expandafter\endgroup\ifx\x\@empty
12326     \else
12327       \pdf@addtoks{#1}{H}%
12328     \fi
12329 }
12330 % parameter is a string
12331 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
12332 % parameter is a string
12333 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
12334 % parameter is a string
12335 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12336 % parameter is a string
12337 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
12338 % parameter is a Boolean
12339 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12340 % parameter is a integer or name
12341 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12342 % parameter is a name
12343 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12344 % parameter is a string
12345 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
12346 % parameter is a array
12347 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
12348 % parameter is a integer
12349 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12350 % parameter is a name
12351 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12352 % parameter is a string
12353 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
12354 % parameter is a string
12355 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
12356 % parameter is a string
12357 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
12358 % parameter is an array
12359 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
12360 % parameter is a string
12361 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12362 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
12363 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
12364 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
12365 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12366 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
12367 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
12368 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
12369 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}

```

```

12370 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12371 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12372 \define@key{PDF}{Trapped}{%
12373   \edef\Hy@temp{#1}%
12374   \ifx\Hy@temp\@empty
12375   \else
12376     \pdf@addtoks{/#1}{Trapped}%
12377   \fi
12378 }
12379
12380 </pdfmarkbase>
12381 <*pdfmark>
12382 \def\Acrobatmenu#1#2{%
12383   \EdefEscapeName\Hy@temp@menu{#1}%
12384   \Hy@Acrobatmenu{#1}{#2}{%
12385     \pdfmark[{#2}]{%
12386       linktype=menu,%
12387       pdfmark=/ANN,%
12388       AcroHighlight=\@pdfhighlight,%
12389       Border=\@pdfborder,%
12390       BorderStyle=\@pdfborderstyle,%
12391       Color=\@menubordercolor,%
12392       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12393       Subtype=/Link,%
12394       PDFAFlags=4%
12395     }%
12396   }%
12397 }

```

And now for some useful examples:

```

12398 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
12399 \def\PDFNextPage@[#1]#2{%
12400   \pdfmark[{#2}]{%
12401     #1,%
12402     Border=\@pdfborder,%
12403     BorderStyle=\@pdfborderstyle,%
12404     Color=.2 .1 .5,%
12405     pdfmark=/ANN,%
12406     Subtype=/Link,%
12407     PDFAFlags=4,%
12408     Page=/Next%
12409   }%
12410 }
12411 \def\PDFPreviousPage{%
12412   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12413 }
12414 \def\PDFPreviousPage@[#1]#2{%
12415   \pdfmark[{#2}]{%
12416     #1,%
12417     Border=\@pdfborder,%
12418     BorderStyle=\@pdfborderstyle,%
12419     Color=.4 .4 .1,%
12420     pdfmark=/ANN,%
12421     Subtype=/Link,%
12422     PDFAFlags=4,%
12423     Page=/Prev%
12424   }%
12425 }

```

```

12426 \def\PDFOpen#1{%
12427   \pdfmark{#1,pdfmark=/DOCVIEW}%
12428 }

```

This will only work if you use Distiller 2.1 or higher.

```

12429 \def\hyper@linkurl#1#2{%
12430   \begingroup
12431     \Hy@pstringdef\Hy@pstringURI{#2}%
12432     \hyper@chars
12433     \leavevmode
12434     \pdfmark[{#1}]{%
12435       pdfmark=/ANN,%
12436       linktype=url,%
12437       AcroHighlight=\@pdfhighlight,%
12438       Border=\@pdfborder,%
12439       BorderStyle=\@pdfborderstyle,%
12440       Color=\@urlbordercolor,%
12441       Action={<<%
12442         /Subtype/URI%
12443         /URI(\Hy@pstringURI)%
12444         \ifHy@href@ismap
12445           /IsMap true%
12446         \fi
12447       >>},%
12448       Subtype=/Link,%
12449       PDFAFlags=4%
12450     }%
12451   \endgroup
12452 }
12453 \def\hyper@linkfile#1#2#3{%
12454   \begingroup
12455     \def\Hy@pstringF{#2}%
12456     \Hy@CleanupFile\Hy@pstringF
12457     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12458     \Hy@pstringdef\Hy@pstringD{#3}%
12459     \Hy@MakeRemoteAction
12460     \leavevmode
12461     \pdfmark[{#1}]{%
12462       pdfmark=/ANN,%
12463       Subtype=/Link,%
12464       PDFAFlags=4,%
12465       AcroHighlight=\@pdfhighlight,%
12466       Border=\@pdfborder,%
12467       BorderStyle=\@pdfborderstyle,%
12468       linktype=file,%
12469       Color=\@filebordercolor,%
12470       Action={%
12471         <<%
12472         /S/GoToR%
12473         \Hy@SetNewWindow
12474         /F(\Hy@pstringF)%
12475         /D%
12476         \ifx\#3\%
12477           [\Hy@href@page\@pdfremotestartview]%
12478         \else
12479           (\Hy@pstringD)cvn%
12480         \fi
12481         \Hy@href@nextactionraw

```

```

12482     >>%
12483   }%
12484 }%
12485 \endgroup
12486 }
12487 \def\@hyper@launch run:#1\|#2#3{%
12488   \begingroup
12489   \Hy@pstringdef\Hy@pstringF{#1}%
12490   \Hy@pstringdef\Hy@pstringP{#3}%
12491   \leavevmode
12492   \pdfmark[{#2}]{%
12493     pdfmark=/ANN,%
12494     Subtype=/Link,%
12495     PDFAFlags=4,%
12496     AcroHighlight=\@pdfhighlight,%
12497     Border=\@pdfborder,%
12498     BorderStyle=\@pdfborderstyle,%
12499     linktype=run,%
12500     Color=\@runbordercolor,%
12501     Action={%
12502       <<%
12503         /S/Launch%
12504         \Hy@SetNewWindow
12505         /F(\Hy@pstringF)%
12506         \ifx\|#3\|%
12507           \else
12508             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12509           \fi
12510           \Hy@href@nextactionraw
12511         >>%
12512       }%
12513     }%
12514   \endgroup
12515 }
12516 \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.

```

12517 \(*dvips)
12518 \providecommand*\XR@ext{}{pdf}
12519 \let\Hy@raisedlink\ltx@empty
12520 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12521 \def\headerps@out#1{\special{! #1}}%
12522 \input{pdfmark.def}%
12523 \ifx\@pdfproducer\relax
12524   \def\@pdfproducer{dvips + Distiller}%
12525 \fi
12526 \providecommand*\@pdfborder{0 0 1}
12527 \providecommand*\@pdfborderstyle{}
12528 \providecommand*\@pdfview{XYZ}

```

```

12529 \providecommand*\@pdfviewparams{ H.V}
12530 \def\Hy@BorderArrayPatch{BorderArrayPatch}

12531 \g@addto@macro\Hy@FirstPageHook{%
12532 \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.

```

12533 /DvipsToPDF{72.27 mul Resolution div} def%
12534 /PDFToDvips{72.27 div Resolution mul} def%
12535 /BPToDvips{72 div Resolution mul}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.

```

12536 /BorderArrayPatch{%
12537   [exch{%
12538     dup dup type/integertype eq exch type/realtype eq or%
12539     {BPToDvips}if%
12540   }forall]%
12541 }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.

```

12542 /HyperBorder {1 PDFToDvips} def%
12543 /H.V {pdf@hoff pdf@voff null} def%
12544 /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

```

12545 /H.S {%
12546   currentpoint %
12547   HyperBorder add /pdf@lly exch def %
12548   dup DvipsToPDF 72 add /pdf@hoff exch def %
12549   HyperBorder sub /pdf@llx exch def%
12550 } 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`

```

12551 /H.L {%
12552   2 sub dup%
12553   /HyperBasePt exch def %
12554   PDFToDvips /HyperBaseDvips exch def %

```



```

12555     currentpoint %
12556     HyperBaseDvips sub /pdf@ury exch def%
12557     /pdf@urx exch def%
12558   } def%
12559   /H.A {%
12560     H.L %
12561 % | /pdf@voff| = the distance from the top of the page to a point
12562 % | \baselineskip| above the current point in PDF coordinates
12563     currentpoint exch pop %
12564     vsize 72 sub exch DvipsToPDF %
12565     HyperBasePt sub % baseline skip
12566     sub /pdf@voff exch def%
12567   } def%
12568   /H.R {%
12569     currentpoint %
12570     HyperBorder sub /pdf@ury exch def %
12571     HyperBorder add /pdf@urx exch def %
12572 % | /pdf@voff| = the distance from the top of the page to the current point, in
12573 % PDF coordinates
12574     currentpoint exch pop vsize 72 sub %
12575     exch DvipsToPDF sub /pdf@voff exch def%
12576   } def%
12577 }%
12578 }
12579 \AtBeginShipoutFirst{%
12580   \ifHy@setpagesize
12581     \begingroup
12582       \@ifundefined{stockwidth}{{%
12583         \ifdim\paperwidth>\z@
12584           \ifdim\paperheight>\z@
12585             \special{papersize=\the\paperwidth,\the\paperheight}%
12586           \fi
12587         \fi
12588       }{%
12589         \ifdim\stockwidth>\z@
12590           \ifdim\stockheight>\z@
12591             \special{papersize=\the\stockwidth,\the\stockheight}%
12592           \fi
12593         \fi
12594       }%
12595     \endgroup
12596   \fi
12597   \Hy@DisableOption{setpagesize}%
12598 }
12599 \def\setpdfinkmargin#1{%
12600   \begingroup
12601     \setlength{\dimen@}{#1}%
12602     \literalps@out{%
12603       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12604     }%
12605   \endgroup
12606 }
12607 </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.

```

12608 (*vtxpdfmark)
12609 \providecommand*\XR@ext}{pdf}
12610 \let\Hy@raisedlink\ltx@empty
12611 \def\literalps@out#1{\special{pS:#1}}%
12612 \def\headerps@out#1{\immediate\special{pS:#1}}%
12613 \input{pdfmark.def}%
12614 \ifx\@pdfproducer\relax
12615   \ifnum\OpMode=\@ne
12616     \def\@pdfproducer{VTeX}%
12617   \else
12618     \def\@pdfproducer{VTeX + Distiller}%
12619   \fi
12620 \fi
12621 \providecommand*\@pdfborder{0 0 1}
12622 \providecommand*\@pdfborderstyle{}
12623 \providecommand*\@pdfview{XYZ}
12624 \providecommand*\@pdfviewparams{ H.V}

12625 \g@addto@macro\Hy@FirstPageHook{%
12626   \headerps@out{%
12627     /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.

```

12628   /HyperBorder {1} def%
12629   /H.V {pdf@hoff pdf@voff null} def%
12630   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12631   /H.S {%
12632     currentpoint %
12633     HyperBorder sub%
12634     /pdf@lly exch def %
12635     dup 72 add /pdf@hoff exch def %
12636     HyperBorder sub%
12637     /pdf@llx exch def%
12638   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12639   /H.L {%
12640     2 sub%
12641     /HyperBasePt exch def %
12642     currentpoint %
12643     HyperBasePt add HyperBorder add%
12644     /pdf@ury exch def %
12645     HyperBorder add%
12646     /pdf@urx exch def%
12647   } def%
12648   /H.A {%
12649     H.L %
12650     currentpoint exch pop %
12651     vsize 72 sub exch %

```

```

12652   HyperBasePt add add%
12653   /pdf@voff exch def%
12654 } def%

pdf@ury =  $Y_c + \text{HyperBorder}$ , pdf@urx =  $X_c + \text{HyperBorder}$ 

12655   /H.R {%
12656   currentpoint %
12657   HyperBorder add%
12658   /pdf@ury exch def %
12659   HyperBorder add%
12660   /pdf@urx exch def %
12661   currentpoint exch pop vsize 72 sub add%
12662   /pdf@voff exch def%
12663 } def%
12664 }%
12665 }

12666 \def\setpdfinkmargin#1{%
12667   \begingroup
12668   \setlength{\dimen@}{#1}%
12669   \literalps@out{%
12670     /HyperBorder{\strip@pt\dimen@}def%
12671   }%
12672   \endgroup
12673 }

12674 </vtxpdfmark>

```

47.11 Textures

```

12675 <*textures>
12676 \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.

```

12677 \begingroup
12678   \obeylines %
12679   \gdef\Hy@ps@CR{\noexpand
12680   }%
12681 \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`.

```

12682 \def\literalps@out#1{%
12683   \special{postscript 0 0 transform}%
12684   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12685 }%
12686 %

```

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.

```

12687 \def\headerps@out#1{%
12688   \special{%
12689     prepostscript TeXdict begin\Hy@ps@CR
12690     #1\Hy@ps@CR
12691     end%
12692   }%
12693 }%
12694 %

```

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.

```

12695 \g@addto@macro\Hy@FirstPageHook{%
12696   \headerps@out{%
12697     /betterpdfmark {%
12698       systemdict begin %
12699       dup /BP eq%
12700       {cleartomark gsave nulldevice []%
12701       {dup /EP eq%
12702       {cleartomark cleartomark grestore}%
12703       {cleartomark}%
12704       ifelse%
12705       }ifelse %
12706     end%
12707   }def\Hy@ps@CR
12708   ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12709 }% end of \headerps@out
12710 }% end of \AtBeginShipoutFirst
12711 %
12712 \input{pdfmark.def}%
12713 %
12714 \ifx\@pdfproducer\relax
12715   \def\@pdfproducer{Textures + Distiller}%
12716 \fi
12717 \providecommand*\@pdfborder{0 0 1}
12718 \providecommand*\@pdfborderstyle{}
12719 \providecommand*\@pdfview{XYZ}
12720 \providecommand*\@pdfviewparams{ H.V}
12721 %

```

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`.

```

12722 \Hy@AtBeginDocument{%
12723   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12724 /vsize {\Hy@pageheight} def%
12725 /DvipsToPDF {} def%
12726 /PDFToDvips {} def%
12727 /BPToDvips {} def%
12728 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12729 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12730 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12731 /H.S {%
12732   currentpoint %
12733   HyperBorder add /pdf@lly exch def %
12734   dup DvipsToPDF 72 add /pdf@hoff exch def %
12735   HyperBorder sub /pdf@llx exch def%
12736 } def\Hy@ps@CR
12737 /H.L {%
12738   2 sub %
12739   PDFToDvips /HyperBase exch def %
12740   currentpoint %
12741   HyperBase sub /pdf@ury exch def%
12742   /pdf@urx exch def%
12743 } def\Hy@ps@CR
12744 /H.A {%
12745   H.L %
12746   currentpoint exch pop %
12747   vsize 72 sub exch DvipsToPDF %
12748   HyperBase sub % baseline skip
12749   sub /pdf@voff exch def%
12750 } def\Hy@ps@CR
12751 /H.R {%
12752   currentpoint %
12753   HyperBorder sub /pdf@ury exch def %
12754   HyperBorder add /pdf@urx exch def %
12755   currentpoint exch pop vsize 72 sub %
12756   exch DvipsToPDF sub /pdf@voff exch def%
12757 } def\Hy@ps@CR
12758 }%
12759 }

12760 \def\setpdfinkmargin#1{%
12761   \begingroup
12762     \setlength{\dimen@}{#1}%
12763     \literalps@out{%
12764       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12765     }%
12766   \endgroup
12767 }

12768 \Hy@AtBeginDocument{%
12769   \ifHy@colorlinks
12770     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12771   \fi
12772 }

```

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.

```

12773 \expandafter\let\expandafter\keepPDF@SetupDoc

```

```

12774 \csname PDF@SetupDoc\endcsname
12775 \def\PDF@SetupDoc{%
12776 \ifx\@baseurl\@empty
12777 \else
12778 \special{html:<base href="\@baseurl">}%
12779 \fi
12780 \keepPDF@SetupDoc
12781 }
12782 \Hy@WrapperDef\hyper@anchor#1{%
12783 \Hy@SaveLastskip
12784 \Hy@VerboseAnchor{#1}%
12785 \begingroup
12786 \let\protect=\string
12787 \special{html:<a name=%
12788 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12789 \endgroup
12790 \Hy@activeanchortrue
12791 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12792 \special{html:</a>}%
12793 \Hy@activeanchorfalse
12794 \Hy@RestoreLastskip
12795 }
12796 \Hy@WrapperDef\hyper@anchorstart#1{%
12797 \Hy@SaveLastskip
12798 \Hy@VerboseAnchor{#1}%
12799 \begingroup
12800 \hyper@chars
12801 \special{html:<a name=%
12802 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12803 \endgroup
12804 \Hy@activeanchortrue
12805 }
12806 \def\hyper@anchorend{%
12807 \special{html:</a>}%
12808 \Hy@activeanchorfalse
12809 \Hy@RestoreLastskip
12810 }
12811 \def\@urltype{url}
12812 \def\hyper@linkstart#1#2{%
12813 \Hy@VerboseLinkStart{#1}{#2}%
12814 \expandafter\Hy@colorlink\csname @#1color\endcsname
12815 \def\Hy@tempa{#1}%
12816 \ifx\Hy@tempa\@urltype
12817 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12818 \else
12819 \begingroup
12820 \hyper@chars
12821 \special{%
12822 html:<a href=%
12823 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
12824 }%
12825 \endgroup
12826 \fi
12827 }
12828 \def\hyper@linkend{%
12829 \special{html:</a>}%
12830 \Hy@endcolorlink

```

```

12831 }
12832 \def\hyper@linkfile#1#2#3{%
12833   \hyper@linkurl{#1}{%
12834     \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
12835   }%
12836 }
12837 \def\hyper@linkurl#1#2{%
12838   \leavevmode
12839   \ifHy@raiselinks
12840     \Hy@SaveSpaceFactor
12841     \Hy@SaveSavedSpaceFactor
12842     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12843     \Hy@RestoreSavedSpaceFactor
12844     \@linkdim\dp\@tempboxa
12845     \lower\@linkdim\hbox{%
12846       \hyper@chars
12847       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12848     }%
12849     \Hy@colorlink\@urlcolor
12850     \Hy@RestoreSpaceFactor
12851     #1\Hy@xspace@end
12852     \Hy@SaveSpaceFactor
12853     \@linkdim\ht\@tempboxa
12854     \advance\@linkdim by -6.5\p@
12855     \raise\@linkdim\hbox{\special{html:</a>}}%
12856     \Hy@endcolorlink
12857     \Hy@RestoreSpaceFactor
12858   \else
12859     \begingroup
12860     \hyper@chars
12861     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12862     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12863     \special{html:</a>}%
12864     \Hy@endcolorlink
12865   \endgroup
12866 \fi
12867 }

```

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

```

12868 \def\hyper@link#1#2#3{%
12869   \Hy@VerboseLinkStart{#1}{#2}%
12870   \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}%
12871 }
12872 \def\hyper@image#1#2{%
12873   \begingroup
12874     \hyper@chars
12875     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12876   \endgroup
12877 }
12878 </textures>

```

47.12 dvipsone

```

12879 % \subsection{dvipsone driver}
12880 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12881 % |special| commands.
12882 (*dvipsone)
12883 \providecommand*\XR@ext}{pdf}

```

```

12884 \let\Hy@raisedlink\ltx@empty
12885 \providecommand*\@pdfborder{0 0 1}
12886 \providecommand*\@pdfborderstyle{}
12887 \def\literalps@out#1{\special{ps:#1}}%
12888 \def\headerps@out#1{\special{headertext=#1}}%
12889 \input{pdfmark.def}%
12890 \HyInfo@AddonUnsupportedtrue
12891 \def\PDF@FinishDoc{%
12892   \Hy@UseMaketitleInfos
12893   \HyInfo@TrappedUnsupported
12894   \special{PDF: Keywords \@pdfkeywords}%
12895   \special{PDF: Title \@pdftitle}%
12896   \special{PDF: Creator \@pdfcreator}%
12897   \ifx\@pdfcreationdate\@empty
12898   \else
12899     \special{PDF: CreationDate \@pdfcreationdate}%
12900   \fi
12901   \ifx\@pdfmoddate\@empty
12902   \else
12903     \special{PDF: ModDate \@pdfmoddate}%
12904   \fi
12905   \special{PDF: Author \@pdfauthor}%
12906   \ifx\@pdfproducer\relax
12907   \else
12908     \special{PDF: Producer \@pdfproducer}%
12909   \fi
12910   \special{PDF: Subject \@pdfsubject}%
12911   \Hy@DisableOption{pdfauthor}%
12912   \Hy@DisableOption{pdftitle}%
12913   \Hy@DisableOption{pdfsubject}%
12914   \Hy@DisableOption{pdfcreator}%
12915   \Hy@DisableOption{addtopdfcreator}%
12916   \Hy@DisableOption{pdfcreationdate}%
12917   \Hy@DisableOption{pdfcreationdate}%
12918   \Hy@DisableOption{pdfmoddate}%
12919   \Hy@DisableOption{pdfproducer}%
12920   \Hy@DisableOption{pdfkeywords}%
12921   \Hy@DisableOption{pdftrapped}%
12922   \Hy@DisableOption{pdfinfo}%
12923 }
12924 \def\PDF@SetupDoc{%
12925   \def\Hy@temp{}%
12926   \ifx\@pdfstartpage\@empty
12927   \else
12928     \ifx\@pdfstartview\@empty
12929     \else
12930       \edef\Hy@temp{%
12931         ,Page=\@pdfstartpage
12932         ,View=\@pdfstartview
12933       }%
12934     \fi
12935   \fi
12936   \edef\Hy@temp{%
12937     \noexpand\pdfmark{%
12938       pdfmark=/DOCVIEW,%
12939       PageMode=/\@pdfpagemode
12940     }\Hy@temp

```



```

12941 }%
12942 }%
12943 \Hy@temp
12944 \ifx\@pdfpagescrop\@empty
12945 \else
12946 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12947 \fi
12948 \edef\Hy@temp{%
12949 \ifHy@pdftoolbar\else /HideToolbar true\fi
12950 \ifHy@pdfmenubar\else /HideMenubar true\fi
12951 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12952 \ifHy@pdfwindow /FitWindow true\fi
12953 \ifHy@pdfcenterwindow /CenterWindow true\fi
12954 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12955 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12956 \Hy@UseNameKey{Direction}\@pdfdirection
12957 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12958 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12959 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12960 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12961 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12962 \Hy@UseNameKey{Duplex}\@pdfduplex
12963 \ifx\@pdfpicktraybypdfsize\@empty
12964 \else
12965 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12966 \fi
12967 \ifx\@pdfprintpagerange\@empty
12968 \else
12969 /PrintPageRange[\@pdfprintpagerange]%
12970 \fi
12971 \ifx\@pdfnumcopies\@empty
12972 \else
12973 /NumCopies \@pdfnumcopies
12974 \fi
12975 }%
12976 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12977 \pdfmark{%
12978 pdfmark=/PUT,%
12979 Raw={%
12980 \string{Catalog\string}<<%
12981 \ifx\Hy@temp\@empty
12982 \else
12983 /ViewerPreferences<<\Hy@temp>>%
12984 \fi
12985 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12986 \ifx\@pdflang\relax
12987 \else
12988 /Lang(\@pdflang)%
12989 \fi
12990 \ifx\@baseurl\@empty
12991 \else
12992 /URI<</Base(\Hy@pstringB)>>%
12993 \fi
12994 >>%
12995 }%
12996 }%
12997 }

```

```

12998 \providecommand*\@pdfview{XYZ}
12999 \providecommand*\@pdfviewparams{ %
13000   gsave revscl currentpoint grestore %
13001   72 add exch pop null exch null%
13002 }
13003 \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 .

```

13004 \g@addto@macro\Hy@FirstPageHook{%
13005   \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

13006   /DvipsToPDF { 65781 div } def%
13007   /PDFToDvips { 65781 mul } def%
13008   /BPToDvips{65781 mul}def%
13009   /HyperBorder { 1 PDFToDvips } def%
13010   /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.

```

13011   /BorderArrayPatch{%
13012     [exch{%
13013       dup dup type/integertype eq exch type/realtype eq or%
13014       {BPToDvips}if%
13015     }forall]%
13016   }def%

13017   /H.S {%
13018     currentpoint %
13019     HyperBorder add /pdf@lly exch def %
13020     dup DvipsToPDF 72 add /pdf@hoff exch def %
13021     HyperBorder sub /pdf@llx exch def%
13022   } def%

13023   /H.L {%
13024     2 sub %
13025     PDFToDvips /HyperBase exch def %
13026     currentpoint %
13027     HyperBase sub /pdf@ury exch def%
13028     /pdf@urx exch def%
13029   } def%

13030   /H.A {%
13031     H.L %
13032     currentpoint exch pop %
13033     HyperBase sub % baseline skip
13034     DvipsToPDF /pdf@voff exch def%
13035   } def%

13036   /H.R {%
13037     currentpoint %
13038     HyperBorder sub /pdf@ury exch def %
13039     HyperBorder add /pdf@urx exch def %
13040     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
13041   } def%
13042 }%
13043 }

```

```

13044 \def\setpdfinkmargin#1{%
13045   \begingroup
13046     \setlength{\dimen@}{#1}%
13047     \literalps@out{%
13048       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13049     }%
13050   \endgroup
13051 }
13052 </dvipsone>

```

47.13 TeX4ht

```

13053 (*tex4ht)
13054 \providecommand*\XR@ext>{html}
13055 \let\Hy@raisedlink\ltx@empty
13056 \@ifpackageloaded{tex4ht}{%
13057   \Hy@InfoNoLine{tex4ht is already loaded}%
13058 }{%
13059   \RequirePackage[hTeX4ht]{tex4ht}%
13060 }
13061 \hyperlinkfileprefix{}
13062 \let\PDF@FinishDoc\ltx@empty
13063 \def\PDF@SetupDoc{%
13064   \ifx\@baseurl\@empty
13065   \else
13066     \special{t4ht=<base href="\@baseurl">}%
13067   \fi
13068 }
13069 \Hy@WrapperDef\hyper@anchor#1{%
13070   \Hy@SaveLastskip
13071   \Hy@VerboseAnchor{#1}%
13072   \begingroup
13073     \let\protect=\string
13074     \special{t4ht=<a name=%
13075       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13076   \endgroup
13077   \Hy@activeanchortrue
13078   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13079   \special{t4ht=</a>}%
13080   \Hy@activeanchorfalse
13081   \Hy@RestoreLastskip
13082 }
13083 \Hy@WrapperDef\hyper@anchorstart#1{%
13084   \Hy@SaveLastskip
13085   \Hy@VerboseAnchor{#1}%
13086   \begingroup
13087     \hyper@chars\special{t4ht=<a name=%
13088       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13089   \endgroup
13090   \Hy@activeanchortrue
13091 }
13092 \def\hyper@anchorend{%
13093   \special{t4ht=</a>}%
13094   \Hy@activeanchorfalse
13095   \Hy@RestoreLastskip
13096 }
13097 \def\@urltype{url}
13098 \def\hyper@linkstart#1#2{%

```

```

13099 \Hy@VerboseLinkStart{#1}{#2}%
13100 \expandafter\Hy@colorlink\csname @#1color\endcsname
13101 \def\Hy@tempa{#1}%
13102 \ifx\Hy@tempa\@urltype
13103   \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13104 \else
13105   \begingroup
13106     \hyper@chars
13107     \special{t4ht=<a href=%
13108       \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
13109   \endgroup
13110 \fi
13111 }
13112 \def\hyper@linkend{%
13113   \special{t4ht=</a>}%
13114   \Hy@endcolorlink
13115 }
13116 \def\hyper@linkfile#1#2#3{%
13117   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
13118 }
13119 \def\hyper@linkurl#1#2{%
13120   \leavevmode
13121   \ifHy@raiselinks
13122     \Hy@SaveSpaceFactor
13123     \Hy@SaveSavedSpaceFactor
13124     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13125     \Hy@RestoreSavedSpaceFactor
13126     \@linkdim\dp\@tempboxa
13127     \lower\@linkdim\hbox{%
13128       \begingroup
13129         \hyper@chars
13130         \special{%
13131           t4ht=<a href=\hyper@quote#2\hyper@quote>%
13132         }%
13133       \endgroup
13134     }%
13135     \Hy@colorlink\@urlcolor
13136     \Hy@RestoreSpaceFactor
13137     #1\Hy@xspace@end
13138     \Hy@SaveSpaceFactor
13139     \Hy@endcolorlink
13140     \@linkdim\ht\@tempboxa
13141     \advance\@linkdim by -6.5\p@
13142     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
13143     \Hy@RestoreSpaceFactor
13144   \else
13145     \begingroup
13146       \hyper@chars
13147       \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13148       \Hy@colorlink\@urlcolor
13149       #1\Hy@xspace@end
13150       \Hy@endcolorlink
13151       \special{t4ht=</a>}%
13152     \endgroup
13153   \fi
13154 }

```

Poor implementation of \hyper@link without considering #1.

```

13155 \def\hyper@link#1#2#3{%
13156   \Hy@VerboseLinkStart{#1}{#2}%
13157   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
13158 }
13159 \def\hyper@image#1#2{%
13160   \begingroup
13161     \hyper@chars
13162     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
13163   \endgroup
13164 }
13165 \let\autoref\ref
13166 \ifx \rEFLiNK \UnDef
13167   \def\rEFLiNK #1#2{#2}%
13168 \fi
13169 \let\backref\ltx@gobble

Fix for tex4ht.
13170 \AtBeginDocument{%
13171   \expandafter
13172   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13173   \expandafter\def\csname Make:Label\endcsname#1#2{%
13174     \ifhmode
13175       \Hy@SaveSpaceFactor
13176     \else
13177       \global\Hy@SavedSpaceFactor=1000 %
13178     \fi
13179     \Hy@OrgMakeLabel{#1}{%
13180       \Hy@RestoreSpaceFactor
13181       #2\Hy@xspace@end%
13182       \Hy@SaveSpaceFactor
13183     }%
13184     \Hy@RestoreSpaceFactor
13185   }%
13186 }
13187 </tex4ht>
13188 <*tex4htcfg>
13189 \IfFileExists{\jobname.cfg}{\endinput}{}
13190 \Preamble{html}
13191   \begin{document}%
13192 \EndPreamble
13193 \def\TeX{\TeX}
13194 \def\OMEGA{\Omega}
13195 \def\LaTeX{\LaTeX}
13196 \def\LaTeXe{\LaTeXe}
13197 \def\eTeX{e-TeX}
13198 \def\MF{Metafont}
13199 \def\MP{MetaPost}
13200 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13201 <*pdfmark>
13202 \long\def\@Form[#1]{%
13203   \g@addto@macro\Hy@FirstPageHook{%
13204     \headerps@out{%
13205 [%

```

13206 /_objdef{pdfDocEncoding}%
13207 /type/dict%
13208 /OBJ pdfmark%
13209 [%
13210 {pdfDocEncoding}%
13211 <<%
13212 /Type/Encoding%
13213 /Differences[%
13214 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13215 /tilde %
13216 39/quotesingle %
13217 96/grave %
13218 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13219 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13220 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13221 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
13222 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13223 164/currency %
13224 166/brokenbar %
13225 168/dieresis/copyright/ordfeminine %
13226 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13227 /twosuperior/threesuperior/acute/mu %
13228 183/periodcentered/cedilla/onesuperior/ordmasculine %
13229 188/onequarter/onehalf/threequarters %
13230 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13231 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13232 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13233 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13234 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13235 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13236 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13237 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13238 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
13239 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13240]%
13241 >>%
13242 /PUT pdfmark%
13243 [%
13244 /_objdef{ZaDb}%
13245 /type/dict%
13246 /OBJ pdfmark%
13247 [%
13248 {ZaDb}%
13249 <<%
13250 /Type/Font%
13251 /Subtype/Type1%
13252 /Name/ZaDb%
13253 /BaseFont/ZapfDingbats%
13254 >>%
13255 /PUT pdfmark%
13256 [%
13257 /_objdef{Helv}%
13258 /type/dict%
13259 /OBJ pdfmark%
13260 [%
13261 {Helv}%
13262 <<%

```

13263 /Type/Font%
13264 /Subtype/Type1%
13265 /Name/Helv%
13266 /BaseFont/Helvetica%
13267 /Encoding{pdfDocEncoding}%
13268 >>%
13269 /PUT pdfmark%
13270 [%
13271 /__objdef{aform}%
13272 /type/dict%
13273 /OBJ pdfmark%
13274 [%
13275 /__objdef{afields}%
13276 /type/array%
13277 /OBJ pdfmark%
13278 [%
13279 /__objdef{corder}%
13280 /type/array%
13281 /OBJ pdfmark%
13282 {%
13283 [%
13284 /BBox[0 0 100 100]%
13285 /__objdef{Check}%
13286 /BP pdfmark %
13287 1 0 0 setrgbcolor%
13288 /ZapfDingbats 80 selectfont %
13289 20 20 moveto%
13290 (4)show%
13291 [/EP pdfmark%
13292 [%
13293 /BBox[0 0 100 100]%
13294 /__objdef{Cross}%
13295 /BP pdfmark %
13296 1 0 0 setrgbcolor%
13297 /ZapfDingbats 80 selectfont %
13298 20 20 moveto%
13299 (8)show%
13300 [/EP pdfmark%
13301 [%
13302 /BBox[0 0 250 100]%
13303 /__objdef{Submit}%
13304 /BP pdfmark %
13305 0.6 setgray %
13306 0 0 250 100 rectfill %
13307 1 setgray %
13308 2 2 moveto %
13309 2 98 lineto %
13310 248 98 lineto %
13311 246 96 lineto %
13312 4 96 lineto %
13313 4 4 lineto %
13314 fill %
13315 0.34 setgray %
13316 248 98 moveto %
13317 248 2 lineto %
13318 2 2 lineto %
13319 4 4 lineto %

```

```

13320 246 4 lineto %
13321 246 96 lineto %
13322 fill%
13323 /Helvetica 76 selectfont %
13324 0 setgray %
13325 8 22.5 moveto%
13326 (Submit)show%
13327 [/EP pdfmark%
13328 [%
13329 /BBox[0 0 250 100]%
13330 /_objdef{SubmitP}%
13331 /BP pdfmark %
13332 0.6 setgray %
13333 0 0 250 100 rectfill %
13334 0.34 setgray %
13335 2 2 moveto %
13336 2 98 lineto %
13337 248 98 lineto %
13338 246 96 lineto %
13339 4 96 lineto %
13340 4 4 lineto %
13341 fill %
13342 1 setgray %
13343 248 98 moveto %
13344 248 2 lineto %
13345 2 2 lineto %
13346 4 4 lineto %
13347 246 4 lineto %
13348 246 96 lineto %
13349 fill%
13350 /Helvetica 76 selectfont %
13351 0 setgray %
13352 10 20.5 moveto%
13353 (Submit)show%
13354 [/EP pdfmark%
13355 } ?pdfmark%
13356 [%
13357 {aform}%
13358 <<%
13359 /Fields{afields}%
13360 /DR<<%
13361 /Font<<%
13362 /ZaDb{ZaDb}%
13363 /Helv{Helv}%
13364 >>%
13365 >>%
13366 /DA(/Helv 10 Tf 0 g)%
13367 /CO{corder}%
13368 \ifHy@pdfa
13369 \else
13370 \ifHyField@NeedAppearances
13371 /NeedAppearances true%
13372 \fi
13373 \fi
13374 >>%
13375 /PUT pdfmark%
13376 [%

```



```

13377 {Catalog}%
13378 <<%
13379 /AcroForm{aform}%
13380 >>%
13381 /PUT pdfmark%
13382 }}%
13383 \kvsetkeys{Form}{#1}%
13384 }
13385 \let\@endForm\ltx@empty
13386 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13387 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13388 }

13389 \newcount\HyField@AnnotCount
13390 \HyField@AnnotCount=\z@
13391 \def\HyField@AdvanceAnnotCount{%
13392 \global\advance\HyField@AnnotCount\@ne
13393 }
13394 \def\HyField@TheAnnotCount{%
13395 \the\HyField@AnnotCount
13396 }

13397 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13398 \def\HyField@AddToFields#1{%
13399 \pdfmark{%
13400 pdfmark=/APPEND,%
13401 Raw={%
13402 \string{afields\string}%
13403 \string{#1\HyField@TheAnnotCount\string}%
13404 }%
13405 }%
13406 \ifx\Fld@calculate@code\ltx@empty
13407 \else
13408 \pdfmark{%
13409 pdfmark=/APPEND,%
13410 Raw={%
13411 \string{corder\string}%
13412 \string{#1\HyField@TheAnnotCount\string}%
13413 }%
13414 }%
13415 \fi
13416 }

13417 \def\@TextField[#1]#2{% parameters, label
13418 \def\Fld@name{#2}%
13419 \let\Fld@default\ltx@empty
13420 \let\Fld@value\@empty
13421 \def\Fld@width{\DefaultWidthofText}%
13422 \def\Fld@height{%
13423 \ifFld@multiline
13424 \DefaultHeightofTextMultiline
13425 \else
13426 \DefaultHeightofText
13427 \fi
13428 }%
13429 \begingroup
13430 \expandafter\HyField@SetKeys\expandafter{%
13431 \DefaultOptionsofText,#1%
13432 }%

```

```

13433 \HyField@FlagsText
13434 \ifFld@hidden\def\Fld@width{1sp}\fi
13435 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13436 \HyField@AdvanceAnnotCount
13437 \LayoutTextField{#2}{%
13438   \leavevmode
13439   \Hy@escapeform\PDFForm@Text
13440   \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
13441     pdfmark=/ANN,%
13442     objdef=text\HyField@TheAnnotCount,%
13443     Raw={\PDFForm@Text}%
13444   }%
13445 }%
13446 \HyField@AddToFields{text}%
13447 \endgroup
13448 }
13449 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13450   \def\Fld@name{#2}%
13451   \let\Fld@default\relax
13452   \let\Fld@value\relax
13453   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13454   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13455   \begingroup
13456     \Fld@menulength=0 %
13457     \@tempdima\z@
13458     \@for\@curropt:=#3\do{%
13459       \expandafter\Fld@checkequals\@curropt==\%
13460       \Hy@StepCount\Fld@menulength
13461       \settowidth{\@tempdimb}{\@currDisplay}%
13462       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13463     }%
13464     \advance\@tempdima by 15\p@
13465     \begingroup
13466       \HyField@SetKeys{#1}%
13467     \edef\x{\endgroup
13468       \noexpand\expandafter
13469       \noexpand\HyField@SetKeys
13470       \noexpand\expandafter{%
13471         \expandafter\noexpand\csname DefaultOptionsof%
13472         \ifFld@radio
13473           Radio%
13474         \else
13475           \ifFld@combo
13476             \ifFld@popdown
13477               PopdownBox%
13478             \else
13479               ComboBox%
13480             \fi
13481           \else
13482             ListBox%
13483           \fi
13484         \fi
13485       \endcsname
13486     }%
13487   }\x
13488   \HyField@SetKeys{#1}%
13489   \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

13490 \ifx\Fld@value\relax
13491 \let\Fld@value\Fld@default
13492 \fi
13493 \LayoutChoiceField{#2}{%
13494 \ifFld@radio
13495 \HyField@FlagsRadioButton
13496 \@@Radio{#3}%
13497 \else
13498 \begingroup
13499 \HyField@FlagsChoice
13500 \ifdim\Fld@width<\@tempdima
13501 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13502 \edef\Fld@width{\the\@tempdima}%
13503 \fi
13504 \ifFld@combo
13505 \else
13506 \@tempdima=\the\Fld@menulength\Fld@charsize
13507 \advance\@tempdima by \Fld@borderwidth bp %
13508 \advance\@tempdima by \Fld@borderwidth bp %
13509 \edef\Fld@height{\the\@tempdima}%
13510 \fi
13511 \@@ListBox{#3}%
13512 \endgroup
13513 \fi
13514 }%
13515 \endgroup
13516 }
13517 \def\@@Radio#1{%
13518 \Fld@listcount=0 %
13519 \EdefEscapeName\Fld@default{\Fld@default}%
13520 \@for\@curropt:=#1\do{%
13521 \expandafter\Fld@checkequals\@curropt==\%
13522 \EdefEscapeName\@currValue{\@currValue}%
13523 \Hy@StepCount\Fld@listcount
13524 \@currDisplay\space
13525 \Hy@escapeform\PDFForm@Radio
13526 \ifnum\Fld@listcount=1 %
13527 \HyField@AdvanceAnnotCount
13528 \fi
13529 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13530 pdfmark=/ANN,%
13531 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13532 Raw={%
13533 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13534 }%
13535 } % deliberate space between radio buttons
13536 \ifnum\Fld@listcount=1 %
13537 \HyField@AddToFields{radio}%
13538 \fi
13539 }%
13540 }
13541 \newcount\Fld@listcount
13542 \def\@@ListBox#1{%
13543 \HyField@PDFChoices{#1}%
13544 \Hy@escapeform\PDFForm@List
13545 \HyField@AdvanceAnnotCount
13546 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%

```

```

13547 pdfmark=/ANN,%
13548 objdef=list\HyField@TheAnnotCount,%
13549 Raw={\PDFForm@List}%
13550 }%
13551 \HyField@AddToFields{list}%
13552 }
13553 \def\@PushButton[#1]#2{% parameters, label
13554 \def\Fld@name{#2}%
13555 \begingroup
13556 \expandafter\HyField@SetKeys\expandafter{%
13557 \DefaultOptionsofPushButton,#1%
13558 }%
13559 \ifHy@pdfa
13560 \Hy@Error{%
13561 PDF/A: Push button with JavaScript is prohibited%
13562 }\@ehc
13563 \LayoutPushButtonField{%
13564 \leavevmode
13565 \MakeButtonField{#2}%
13566 }%
13567 \else
13568 \HyField@FlagsPushButton
13569 \ifFld@hidden\def\Fld@width{1sp}\fi
13570 \HyField@AdvanceAnnotCount
13571 \LayoutPushButtonField{%
13572 \leavevmode
13573 \Hy@escapeform\PDFForm@Push
13574 \pdfmark[\MakeButtonField{#2}]{%
13575 pdfmark=/ANN,%
13576 objdef=push\HyField@TheAnnotCount,%
13577 Raw={\PDFForm@Push}%
13578 }%
13579 }%
13580 \HyField@AddToFields{push}%
13581 \fi
13582 \endgroup
13583 }
13584 \def\@Submit[#1]#2{%
13585 \def\Fld@width{\DefaultWidthofSubmit}%
13586 \def\Fld@height{\DefaultHeightofSubmit}%
13587 \begingroup
13588 \expandafter\HyField@SetKeys\expandafter{%
13589 \DefaultOptionsofSubmit,#1%
13590 }%
13591 \HyField@FlagsPushButton
13592 \HyField@FlagsSubmit
13593 \ifFld@hidden\def\Fld@width{1sp}\fi
13594 \Hy@escapeform\PDFForm@Submit
13595 \HyField@AdvanceAnnotCount
13596 \pdfmark[\MakeButtonField{#2}]{%
13597 pdfmark=/ANN,%
13598 objdef=submit\HyField@TheAnnotCount,%
13599 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
13600 }%
13601 \HyField@AddToFields{submit}%
13602 \endgroup
13603 }

```

```

13604 \def\@Reset[#1]#2{%
13605   \def\Fld@width{\DefaultWidthofReset}%
13606   \def\Fld@height{\DefaultHeightofReset}%
13607   \begingroup
13608     \expandafter\HyField@SetKeys\expandafter{%
13609       \DefaultOptionsofReset,#1%
13610     }%
13611     \leavevmode
13612     \ifHy@pdfa
13613       \Hy@Error{%
13614         PDF/A: Reset action is prohibited%
13615       }\@ehc
13616       \MakeButtonField{#2}%
13617     \else
13618       \HyField@FlagsPushButton
13619       \ifFld@hidden\def\Fld@width{1sp}\fi
13620       \Hy@escapeform\PDFForm@Reset
13621       \HyField@AdvanceAnnotCount
13622       \pdfmark[\MakeButtonField{#2}]{%
13623         pdfmark=/ANN,%
13624         objdef=reset\HyField@TheAnnotCount,%
13625         Raw={\PDFForm@Reset}%
13626       }%
13627       \HyField@AddToFields{reset}%
13628     \fi
13629   \endgroup
13630 }%
13631 \def\@CheckBox[#1]#2{% parameters, label
13632   \def\Fld@name{#2}%
13633   \def\Fld@default{0}%
13634   \begingroup
13635     \def\Fld@width{\DefaultWidthofCheckBox}%
13636     \def\Fld@height{\DefaultHeightofCheckBox}%
13637     \expandafter\HyField@SetKeys\expandafter{%
13638       \DefaultOptionsofCheckBox,#1%
13639     }%
13640     \HyField@FlagsCheckBox
13641     \ifFld@hidden\def\Fld@width{1sp}\fi
13642     \HyField@AdvanceAnnotCount
13643     \LayoutCheckField{#2}{%
13644       \leavevmode
13645       \Hy@escapeform\PDFForm@Check
13646       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13647         pdfmark=/ANN,%
13648         objdef=check\HyField@TheAnnotCount,%
13649         Raw={\PDFForm@Check}%
13650       }%
13651     }%
13652     \HyField@AddToFields{check}%
13653   \endgroup
13654 }
13655 \pdfmark

```

48.2 HyperTeX

```

13656 \hypertex
13657 \def\@Form[#1]{%
13658   \Hy@Message{Sorry, HyperTeX does not support FORMs}%

```

```

13659 }
13660 \let\@endForm\ltx@empty
13661 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13662   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13663 }
13664 \def\@TextField[#1]#2{% parameters, label
13665   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13666 }
13667 \def\@CheckBox[#1]#2{% parameters, label
13668   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13669 }
13670 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13671   \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13672 }
13673 \def\@PushButton[#1]#2{% parameters, label
13674   \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13675 }
13676 \def\@Reset[#1]#2{%
13677   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13678 }
13679 \def\@Submit[#1]#2{%
13680   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13681 }
13682 \</hypertex>

```

48.3 TeX4ht

```

13683 \*tex4ht
13684 \def\@Form[#1]{%
13685   \kvsetkeys{Form}{#1}%
13686   \HCode{<form action="\Form@action" method="\Form@method">}%
13687 }
13688 \def\@endForm{\HCode{</form>}}
13689 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13690   \Hy@Message{Sorry, TeX4ht does not support gauges}%
13691 }
13692 \def\@TextField[#1]#2{% parameters, label
13693   \let\Hy@reserved@a\@empty
13694   \def\Fld@name{#2}%
13695   \let\Fld@default\ltx@empty
13696   \bgroup
13697     \Field@toks={ }%
13698     \kvsetkeys{Field}{#1}%
13699     \HCode{<label for="\Fld@name">#2</label>}%
13700     \ifFld@password
13701       \@@PasswordField
13702     \else
13703       \@@TextField
13704     \fi
13705   \egroup
13706 }
13707 \def\@@PasswordField{%
13708   \HCode{%
13709     <input type="password" %
13710       id="\Fld@name" %
13711       name="\Fld@name" %
13712       \ifFld@hidden type="hidden" \fi
13713       value="\Fld@default" %

```

```

13714     \the\Field@toks
13715     >%
13716 }%
13717 }
13718 \def\@@TextField{%
13719   \ifFld@multiline
13720     \HCode{<textarea %
13721       \ifFld@readonly readonly \fi
13722       id="\Fld@name" %
13723       name="\Fld@name" %
13724       \ifFld@hidden type="hidden" \fi
13725       \the\Field@toks>%
13726     }%
13727     \Fld@default
13728     \HCode{</textarea>}%
13729   \else
13730     \HCode{<input type="text" %
13731       \ifFld@readonly readonly \fi
13732       id="\Fld@name" %
13733       name="\Fld@name" %
13734       \ifFld@hidden type="hidden" \fi
13735       value="\Fld@default" %
13736       \the\Field@toks>%
13737     }%
13738   \fi
13739 }
13740 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13741   \def\Fld@name{#2}%
13742   \let\Fld@default\ltx@empty
13743   \let\Hy@reserved@a\relax
13744   \begingroup
13745     \expandafter\Fld@findlength#3\\%
13746     \Field@toks={ }%
13747     \kvsetkeys{Field}{#1}%
13748     #2%
13749     \ifFld@radio
13750       \expandafter\@@Radio#3\\%
13751     \else
13752       \expandafter\@@Menu#3\\%
13753     \fi
13754   \endgroup
13755 }
13756 \def\Fld@findlength#1\\{%
13757   \Fld@menulength=0 %
13758   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13759 }
13760 \def\@@Menu#1\\{%
13761   \HCode{<select size="\the\Fld@menulength" %
13762     name="\Fld@name" %
13763     \the\Field@toks>%
13764   }%
13765   \@for\@curropt:=#1\do{%
13766     \expandafter\Fld@checkequals\@curropt==\\%
13767     \HCode{<option %
13768       \ifx\@curropt\Fld@default selected \fi
13769       value="\@currValue">\@currDisplay</option>%
13770     }%

```

```

13771 }%
13772 \HCode{</select>}%
13773 }
13774 \def\@@Radio#1\{\%
13775 \@for\@curropt:=#1\do{%
13776 \expandafter\Fld@chekequals\@curropt==\%
13777 \HCode{<input type="radio" %
13778 \ifx\@curropt\Fld@default checked \fi
13779 name="\Fld@name" %
13780 value="\@currValue" %
13781 \the\Field@toks>%
13782 }%
13783 \@currDisplay
13784 }%
13785 }
13786 \def\@PushButton[#1]#2{% parameters, label
13787 \def\Fld@name{#2}%
13788 \bgroup
13789 \Field@toks={ }%
13790 \kvsetkeys{Field}{#1}%
13791 \HCode{<input type="button" %
13792 name="\Fld@name" %
13793 value="#2" %
13794 \the\Field@toks>%
13795 }%
13796 \HCode{</button>}%
13797 \egroup
13798 }
13799 \def\@Submit[#1]#2{%
13800 \HCode{<button type="submit">#2</button>}%
13801 }
13802 \def\@Reset[#1]#2{%
13803 \HCode{<button type="reset">#2</button>}%
13804 }
13805 \def\@CheckBox[#1]#2{% parameters, label
13806 \let\Hy@reserved@a\@empty
13807 \def\Fld@name{#2}%
13808 \def\Fld@default{0}%
13809 \bgroup
13810 \Field@toks={ }%
13811 \kvsetkeys{Field}{#1}%
13812 \HCode{<input type="checkbox" %
13813 \ifFld@checked checked \fi
13814 \ifFld@disabled disabled \fi
13815 \ifFld@readonly readonly \fi
13816 name="\Fld@name" %
13817 \ifFld@hidden type="hidden" \fi
13818 value="\Fld@default" %
13819 \the\Field@toks>%
13820 #2%
13821 }%
13822 \egroup
13823 }
13824 </tex4ht>

```

48.4 pdfTeX

```

13825 <*pdfTeX>

```



```

13826 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13827 \Hy@Message{Sorry, pdftex does not support FORM gauges}%
13828 }
13829 \def\MakeFieldObject#1#2{\sbox0{#1}%
13830 \immediate\pdfxform0 %
13831 \expandafter\edef\csname #2Object\endcsname{%
13832 \the\pdfastxform\space 0 R%
13833 }%
13834 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13835 }%
13836 \let\HyField@afields\ltx@empty
13837 \let\HyField@cofields\ltx@empty
13838 \begingroup\expandafter\expandafter\expandafter\endgroup
13839 \expandafter\ifx\csname pdfastlink\endcsname\relax
13840 \let\HyField@AddToFields\relax
13841 \PackageInfo{hyperref}{%
13842 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13843 \MessageBreak
13844 Adobe Reader/Acrobat accepts an empty /Field array,%
13845 \MessageBreak
13846 but other PDF viewers might complain%
13847 }%
13848 \else
13849 \let\HyField@AuxAddToFields\ltx@gobble
13850 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13851 \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.

```

13852 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13853 \begingroup
13854 \Hy@safe@activestrue
13855 \let\ltx@secondoftwo\relax
13856 \ifx\HyField@cofields\ltx@empty
13857 \xdef\HyField@cofields{%
13858 \ltx@secondoftwo{#1}{ #2 0 R}%
13859 }%
13860 \else
13861 \let\ltx@secondoftwo\relax
13862 \def\HyField@AddCoField###1##2###3{%
13863 \ifx##1\ltx@empty
13864 \ltx@secondoftwo{#1}{ #2 0 R}%
13865 \expandafter\ltx@gobble
13866 \else
13867 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13868 \ltx@secondoftwo{#1}{ #2 0 R}%
13869 \ltx@secondoftwo{##2}{##3}%
13870 \expandafter\expandafter\expandafter\ltx@gobble
13871 \else
13872 \ltx@secondoftwo{##2}{##3}%
13873 \fi
13874 \fi
13875 \HyField@AddCoField
13876 }%
13877 \xdef\HyField@cofields{%
13878 \expandafter\HyField@AddCoField
13879 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13880 }%

```

```

13881 \fi
13882 \endgroup
13883 }%
13884 \Hy@AtBeginDocument{%
13885 \if@filesw
13886 \immediate\write\@mainaux{%
13887 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13888 }%
13889 \immediate\write\@mainaux{%
13890 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13891 }%
13892 \fi
13893 \let\HyField@AfterAuxOpen\@firstofone
13894 \def\HyField@AuxAddToFields#1{%
13895 \xdef\HyField@afields{%
13896 \ifx\HyField@afields\@empty
13897 \else
13898 \HyField@afields
13899 \space
13900 \fi
13901 #1 0 R%
13902 }%
13903 }%
13904 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13905 }%
13906 \def\HyField@AddToFields{%
13907 \expandafter\HyField@@AddToFields\expandafter{%
13908 \the\pdfastlink
13909 }%
13910 \ifx\Fld@calculate@code\ltx@empty
13911 \else
13912 \begingroup
13913 \Hy@safe@activestrue
13914 \edef\Hy@temp{%
13915 \endgroup
13916 \if@filesw
13917 \write\@mainaux{%
13918 \string\HyField@AuxAddToCoFields{%
13919 \Fld@calculate@sortkey
13920 }{%
13921 \the\pdfastlink
13922 }%
13923 }%
13924 \fi
13925 }%
13926 \Hy@temp
13927 \fi
13928 }%
13929 \def\HyField@@AddToFields#1{%
13930 \HyField@AfterAuxOpen{%
13931 \if@filesw
13932 \write\@mainaux{%
13933 \string\HyField@AuxAddToFields{#1}%
13934 }%
13935 \fi
13936 }%
13937 }%

```

```

13938 \fi
13939 \def\@Form[#1]{%
13940   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13941   \kvsetkeys{Form}{#1}%
13942   \pdf@ifdraftmode{}{%
13943     \Hy@FormObjects
13944     \ifnum\pdfTeXversion>13 %
13945       \pdfrefobj\OBJ@pdfdocencoding
13946       \pdfrefobj\OBJ@ZaDb
13947       \pdfrefobj\OBJ@Helv
13948     \fi
13949     \AtVeryEndDocument{%
13950       \immediate\pdfobj{%
13951         <<%
13952         /Fields[\HyField@afields]%
13953         \ifx\HyField@cofields\ltx@empty
13954           \else
13955             /CO[\romannumeral-`\Q\HyField@cofields]%
13956           \fi
13957         /DR<<%
13958         /Font<<%
13959         /ZaDb \OBJ@ZaDb\space 0 R%
13960         /Helv \OBJ@Helv\space 0 R%
13961         >>%
13962       >>%
13963       /DA(/Helv 10 Tf 0 g)%
13964       \ifHy@pdfa
13965       \else
13966         \ifHyField@NeedAppearances
13967           /NeedAppearances true%
13968         \fi
13969       \fi
13970       >>%
13971     }%
13972     \edef\OBJ@acroform{\the\pdfastobj}%
13973     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13974   }%
13975 }%
13976 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13977   \begingroup
13978     \fontfamily{pzd}%
13979     \fontencoding{U}%
13980     \fontseries{m}%
13981     \fontshape{n}%
13982     \selectfont
13983     \char123 %
13984   \endgroup
13985 }{Ding}%
13986 \MakeFieldObject{%
13987   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13988 }{Submit}%
13989 \MakeFieldObject{%
13990   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13991 }{SubmitP}%
13992 }
13993 \let\@endForm\ltx@empty

```

```

13994 \let\HyAnn@AbsPageLabel\ltx@empty
13995 \let\Fld@pageobjref\ltx@empty
13996 \ltx@ifUndefined{pdfpageref}{%
13997 }{%
13998   \ltx@ifpackageloaded{zref-abspage}{%
13999     \newcount\HyAnn@Count
14000     \HyAnn@Count=\ltx@zero
14001     \def\HyAnn@AbsPageLabel{%
14002       \global\advance\HyAnn@Count by\ltx@one
14003       \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
14004       \zref@refused{HyAnn@\the\HyAnn@Count}%
14005     }%
14006     \def\Fld@pageobjref{%
14007       \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
14008         }{%
14009           \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
14010             /P \pdfpageref
14011             \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
14012             \space 0 R%
14013           }{%
14014             }%
14015           }%
14016         }%
14017       }{%
14018       }%
14019     }

14020 \def\@TextField[#1]#2{% parameters, label
14021   \def\Fld@name{#2}%
14022   \let\Fld@default\ltx@empty
14023   \let\Fld@value\@empty
14024   \def\Fld@width{\DefaultWidthofText}%
14025   \def\Fld@height{%
14026     \ifFld@multiline
14027       \DefaultHeightofTextMultiline
14028     \else
14029       \DefaultHeightofText
14030     \fi
14031   }%
14032   \begingroup
14033     \expandafter\HyField@SetKeys\expandafter{%
14034       \DefaultOptionsofText,#1%
14035     }%
14036     \PDFForm@Name
14037     \HyField@FlagsText
14038     \ifFld@hidden\def\Fld@width{1sp}\fi
14039     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14040     \LayoutTextField{#2}%
14041     \leavevmode
14042     \HyAnn@AbsPageLabel
14043     \Hy@escapeform\PDFForm@Text
14044     \pdfstartlink user {\PDFForm@Text}\relax
14045     \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14046     \HyField@AddToFields
14047   }%
14048 \endgroup
14049 }
14050 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

14051 \def\Fld@name{#2}%
14052 \let\Fld@default\relax
14053 \let\Fld@value\relax
14054 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14055 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14056 \begingroup
14057 \Fld@menulength=0 %
14058 \@tempdima\z@
14059 \@for\@curropt:=#3\do{%
14060 \expandafter\Fld@checkequals\@curropt==\%
14061 \Hy@StepCount\Fld@menulength
14062 \settowidth{\@tempdimb}{\@currDisplay}%
14063 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14064 }%
14065 \advance\@tempdima by 15\p@
14066 \begingroup
14067 \HyField@SetKeys{#1}%
14068 \edef\x{\endgroup
14069 \noexpand\expandafter
14070 \noexpand\HyField@SetKeys
14071 \noexpand\expandafter{%
14072 \expandafter\noexpand\curname DefaultOptionsof%
14073 \ifFld@radio
14074 Radio%
14075 \else
14076 \ifFld@combo
14077 \ifFld@popdown
14078 PopdownBox%
14079 \else
14080 ComboBox%
14081 \fi
14082 \else
14083 ListBox%
14084 \fi
14085 \fi
14086 \endcurname
14087 }%
14088 }\x
14089 \HyField@SetKeys{#1}%
14090 \PDFForm@Name
14091 \ifFld@hidden\def\Fld@width{1sp}\fi
14092 \ifx\Fld@value\relax
14093 \let\Fld@value\Fld@default
14094 \fi
14095 \LayoutChoiceField{#2}{%
14096 \ifFld@radio
14097 \HyField@FlagsRadioButton
14098 \@@Radio{#3}%
14099 \else
14100 \begingroup
14101 \HyField@FlagsChoice
14102 \ifdim\Fld@width<\@tempdima
14103 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14104 \edef\Fld@width{\the\@tempdima}%
14105 \fi
14106 \ifFld@combo
14107 \else

```

```

14108      \@tempdima=\the\Fld@menulength\Fld@charsize
14109      \advance\@tempdima by \Fld@borderwidth bp %
14110      \advance\@tempdima by \Fld@borderwidth bp %
14111      \edef\Fld@height{\the\@tempdima}%
14112      \fi
14113      \@@ListBox{#3}%
14114      \endgroup
14115      \fi
14116      }%
14117      \endgroup
14118      }
14119      \def\@@Radio#1{%
14120      \Fld@listcount=0 %
14121      \EdefEscapeName\Fld@default{\Fld@default}%
14122      \@for\@curropt:=#1\do{%
14123      \expandafter\Fld@checkequals\@curropt==\%
14124      \EdefEscapeName\@currValue{\@currValue}%
14125      \Hy@StepCount\Fld@listcount
14126      \@currDisplay\space
14127      \leavevmode
14128      \HyAnn@AbsPageLabel
14129      \Hy@escapeform\PDFForm@Radio
14130      \pdfstartlink user {%
14131      \PDFForm@Radio
14132      /AP<<%
14133      /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.

```

14134      /\@currValue\space \DingObject
14135      >>%
14136      >>%
14137      }%
14138      \relax
14139      \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14140      \ifnum\Fld@listcount=1 %
14141      \HyField@AddToFields
14142      \fi
14143      \space % deliberate space between radio buttons
14144      }%
14145      }
14146      \newcount\Fld@listcount
14147      \def\@@ListBox#1{%
14148      \HyField@PDFChoices{#1}%
14149      \leavevmode
14150      \HyAnn@AbsPageLabel
14151      \Hy@escapeform\PDFForm@List
14152      \pdfstartlink user {\PDFForm@List}\relax
14153      \MakeChoiceField{\Fld@width}{\Fld@height}%
14154      \pdfendlink
14155      \HyField@AddToFields
14156      }
14157      \def\@PushButton[#1]#2{% parameters, label
14158      \def\Fld@name{#2}%
14159      \begingroup
14160      \expandafter\HyField@SetKeys\expandafter{%
14161      \DefaultOptionsofPushButton,#1%

```

```

14162 }%
14163 \PDFForm@Name
14164 \ifHy@pdfa
14165 \Hy@Error{%
14166   PDF/A: Push button with JavaScript is prohibited%
14167 } \@ehc
14168 \LayoutPushButtonField{%
14169   \leavevmode
14170   \MakeButtonField{#2}%
14171 }%
14172 \else
14173 \HyField@FlagsPushButton
14174 \ifFld@hidden\def\Fld@width{1sp}\fi
14175 \LayoutPushButtonField{%
14176   \leavevmode
14177   \HyAnn@AbsPageLabel
14178   \Hy@escapeform\PDFForm@Push
14179   \pdfstartlink user {\PDFForm@Push}\relax
14180   \MakeButtonField{#2}%
14181   \pdfendlink
14182   \HyField@AddToFields
14183 }%
14184 \fi
14185 \endgroup
14186 }
14187 \def\@Submit[#1]#2{%
14188   \def\Fld@width{\DefaultWidthofSubmit}%
14189   \def\Fld@height{\DefaultHeightofSubmit}%
14190   \begingroup
14191     \expandafter\HyField@SetKeys\expandafter{%
14192       \DefaultOptionsofSubmit,#1%
14193     }%
14194     \HyField@FlagsPushButton
14195     \HyField@FlagsSubmit
14196     \ifFld@hidden\def\Fld@width{1sp}\fi
14197     \leavevmode
14198     \HyAnn@AbsPageLabel
14199     \Hy@escapeform\PDFForm@Submit
14200     \pdfstartlink user {%
14201       \PDFForm@Submit
14202       /AP<</N \SubmitObject/D \SubmitPObject>>%
14203     }%
14204     \relax
14205     \MakeButtonField{#2}%
14206     \pdfendlink
14207     \HyField@AddToFields
14208   \endgroup
14209 }
14210 \def\@Reset[#1]#2{%
14211   \def\Fld@width{\DefaultWidthofReset}%
14212   \def\Fld@height{\DefaultHeightofReset}%
14213   \begingroup
14214     \expandafter\HyField@SetKeys\expandafter{%
14215       \DefaultOptionsofReset,#1%
14216     }%
14217     \leavevmode
14218     \ifHy@pdfa

```

```

14219 \Hy@Error{%
14220     PDF/A: Reset action is prohibited%
14221 } \@ehc
14222 \MakeButtonField{#2}%
14223 \else
14224 \HyField@FlagsPushButton
14225 \ifFld@hidden\def\Fld@width{1sp}\fi
14226 \HyAnn@AbsPageLabel
14227 \Hy@escapeform\PDFForm@Reset
14228 \pdfstartlink user {\PDFForm@Reset}\relax
14229 \MakeButtonField{#2}%
14230 \pdfendlink
14231 \HyField@AddToFields
14232 \fi
14233 \endgroup
14234 }
14235 \def\@CheckBox[#1]#2{% parameters, label
14236 \def\Fld@name{#2}%
14237 \def\Fld@default{0}%
14238 \begingroup
14239 \def\Fld@width{\DefaultWidthofCheckBox}%
14240 \def\Fld@height{\DefaultHeightofCheckBox}%
14241 \expandafter\HyField@SetKeys\expandafter{%
14242 \DefaultOptionsofCheckBox,#1%
14243 }%
14244 \PDFForm@Name
14245 \HyField@FlagsCheckBox
14246 \ifFld@hidden\def\Fld@width{1sp}\fi
14247 \LayoutCheckField{#2}{%
14248 \leavevmode
14249 \HyAnn@AbsPageLabel
14250 \Hy@escapeform\PDFForm@Check
14251 \pdfstartlink user {\PDFForm@Check}\relax
14252 \MakeCheckField{\Fld@width}{\Fld@height}%
14253 \pdfendlink
14254 \HyField@AddToFields
14255 }%
14256 \endgroup
14257 }
14258 \def\Hy@FormObjects{%
14259 \pdfobj {%
14260 <<%
14261 /Type/Encoding%
14262 /Differences[%
14263 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14264 /ring/tilde %
14265 39/quotesingle %
14266 96/grave %
14267 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14268 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14269 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14270 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14271 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14272 164/currency %
14273 166/brokenbar %
14274 168/dieresis/copyright/ordfeminine %
14275 172/logicalnot/.notdef/registered/macron/degree/plusminus%

```



```

14276      /twosuperior/threesuperior/acute/mu %
14277      183/periodcentered/cedilla/onesuperior/ordmasculine %
14278      188/onequarter/onehalf/threequarters %
14279      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14280      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14281      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14282      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14283      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14284      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14285      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14286      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14287      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
14288      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14289      ]%
14290      >>%
14291      }%
14292      \xdef\OBJ@pdfdocencoding{\the\pdfflastobj}%
14293      \pdfobj{%
14294      <<%
14295      /Type/Font%
14296      /Subtype/Type1%
14297      /Name/ZaDb%
14298      /BaseFont/ZapfDingbats%
14299      >>%
14300      }%
14301      \xdef\OBJ@ZaDb{\the\pdfflastobj}%
14302      \pdfobj{%
14303      <<%
14304      /Type/Font%
14305      /Subtype/Type1%
14306      /Name/Helv%
14307      /BaseFont/Helvetica%
14308      /Encoding \OBJ@pdfdocencoding\space 0 R%
14309      >>%
14310      }%
14311      \xdef\OBJ@Helv{\the\pdfflastobj}%
14312      \global\let\Hy@FormObjects\relax
14313      }
14314      </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.

```

14315 (*dvipdfm | xetex)

```

\@Gauge

```

14316 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14317   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14318 }

```

\@Form

```

14319 \def\@Form[#1]{%
14320   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14321   \kvsetkeys{Form}{#1}%
14322   \Hy@FormObjects
14323   \@pdfm@mark{obj @afields []}%
14324   \@pdfm@mark{obj @corder []}%

```

```

14325 \@pdfm@mark{%
14326   obj @aform <<%
14327     /Fields @afields%
14328     /DR<<%
14329     /Font<<%
14330     /ZaDb @OBJZaDb%
14331     /Helv @OBJHelv%
14332     >>%
14333     >>%
14334     /DA(/Helv 10 Tf 0 g)%
14335     /CO @corder%
14336     \ifHy@pdfa
14337     \else
14338       \ifHyField@NeedAppearances
14339         /NeedAppearances true%
14340       \fi
14341     \fi
14342     >>%
14343   }%
14344 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14345 }

```

\@endForm

```

14346 \let\@endForm\ltx@empty

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

14347 \def\dvipdfm@setdim{%
14348   height \the\ht\pdfm@box\space
14349   width \the\wd\pdfm@box\space
14350   depth \the\dp\pdfm@box\space
14351 }

```

\HyField@AnnotCount

```

14352 \newcount\HyField@AnnotCount
14353 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

14354 \def\HyField@AdvanceAnnotCount{%
14355   \global\advance\HyField@AnnotCount\@ne
14356 }

```

\HyField@TheAnnotCount

```

14357 \def\HyField@TheAnnotCount{%
14358   \the\HyField@AnnotCount
14359 }

```

\Fld@pageobjref

```

14360 \def\Fld@pageobjref{/P @thispage}%

```

\HyField@AddToFields

```

14361 \def\HyField@AddToFields#1{%
14362   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14363   \ifx\Fld@calculate@code\ltx@empty
14364   \else
14365     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14366   \fi
14367 }

```

\@TextField

```

14368 \def\@TextField[#1]#2{% parameters, label
14369 \def\Fld@name{#2}%
14370 \let\Fld@default\ltx@empty
14371 \let\Fld@value\@empty
14372 \def\Fld@width{\DefaultWidthofText}%
14373 \def\Fld@height{%
14374 \ifFld@multiline
14375 \DefaultHeightofTextMultiline
14376 \else
14377 \DefaultHeightofText
14378 \fi
14379 }%
14380 \begingroup
14381 \expandafter\HyField@SetKeys\expandafter{%
14382 \DefaultOptionsofText,#1%
14383 }%
14384 \PDFForm@Name
14385 \HyField@FlagsText
14386 \ifFld@hidden\def\Fld@width{1sp}\fi
14387 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14388 \setbox\pdfm@box=\hbox{%
14389 \MakeTextField{\Fld@width}{\Fld@height}%
14390 }%
14391 \HyField@AdvanceAnnotCount
14392 \LayoutTextField{#2}{%
14393 \leavevmode
14394 \Hy@escapeform\PDFForm@Text
14395 \@pdfm@mark{%
14396 ann @text\HyField@TheAnnotCount\space
14397 \dvipdfm@setdim << \PDFForm@Text >>%
14398 }%
14399 }%
14400 \unhbox\pdfm@box
14401 \HyField@AddToFields{text}%
14402 % record in @afields array
14403 \endgroup
14404 }

```

\@ChoiceMenu

```

14405 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14406 \def\Fld@name{#2}%
14407 \let\Fld@default\relax
14408 \let\Fld@value\relax
14409 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14410 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14411 \begingroup
14412 \Fld@menulength=0 %
14413 \@tempdima\z@
14414 \@for\@curropt:=#3\do{%
14415 \expandafter\Fld@checkequals\@curropt==\\%
14416 \Hy@StepCount\Fld@menulength
14417 \settowidth{\@tempdimb}{\@currDisplay}%
14418 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14419 }%
14420 \advance\@tempdima by 15\p@
14421 \begingroup

```

```

14422 \HyField@SetKeys{#1}%
14423 \edef\x{\endgroup
14424 \noexpand\expandafter
14425 \noexpand\HyField@SetKeys
14426 \noexpand\expandafter{%
14427 \expandafter\noexpand\csname DefaultOptionsof%
14428 \ifFld@radio
14429 Radio%
14430 \else
14431 \ifFld@combo
14432 \ifFld@popdown
14433 PopdownBox%
14434 \else
14435 ComboBox%
14436 \fi
14437 \else
14438 ListBox%
14439 \fi
14440 \fi
14441 \endcsname
14442 }%
14443 }\x
14444 \HyField@SetKeys{#1}%
14445 \PDFForm@Name
14446 \ifFld@hidden\def\Fld@width{1sp}\fi
14447 \ifx\Fld@value\relax
14448 \let\Fld@value\Fld@default
14449 \fi
14450 \LayoutChoiceField{#2}{%
14451 \ifFld@radio
14452 \HyField@FlagsRadioButton
14453 \@@Radio{#3}%
14454 \else
14455 \begingroup
14456 \HyField@FlagsChoice
14457 \ifdim\Fld@width<\@tempdima
14458 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14459 \edef\Fld@width{\the\@tempdima}%
14460 \fi
14461 \ifFld@combo
14462 \else
14463 \@tempdima=\the\Fld@menulength\Fld@charsize
14464 \advance\@tempdima by \Fld@borderwidth bp %
14465 \advance\@tempdima by \Fld@borderwidth bp %
14466 \edef\Fld@height{\the\@tempdima}%
14467 \fi
14468 \@@ListBox{#3}%
14469 \endgroup
14470 \fi
14471 }%
14472 \endgroup
14473 }

```

\@@Radio

```

14474 \def\@@Radio#1{%
14475 \Fld@listcount=0 %
14476 \EdefEscapeName\Fld@default{\Fld@default}%
14477 \setbox\pdfm@box=\hbox{%

```

```

14478 \MakeRadioField{\Fld@width}{\Fld@height}%
14479 }%
14480 \@for\@curropt:=#1\do{%
14481 \expandafter\Fld@checkequals\@curropt==\%
14482 \EdefEscapeName\@currValue{\@currValue}%
14483 \Hy@StepCount\Fld@listcount
14484 \@currDisplay\space
14485 \leavevmode
14486 \Hy@escapeform\PDFForm@Radio
14487 \ifnum\Fld@listcount=1 %
14488 \HyField@AdvanceAnnotCount
14489 \fi
14490 \@pdfm@mark{%
14491 ann %
14492 \ifnum\Fld@listcount=1 %
14493 @radio\HyField@TheAnnotCount%
14494 \space
14495 \fi
14496 \dvipdfm@setdim
14497 <<%
14498 \PDFForm@Radio
14499 /AP<</N<</\@currValue /null>>>>%
14500 >>%
14501 }%
14502 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14503 \ifnum\Fld@listcount=1 %
14504 \HyField@AddToFields{radio}%
14505 \fi
14506 }%
14507 }

```

\Fld@listcount

```

14508 \newcount\Fld@listcount

```

\@@ListBox

```

14509 \def\@@ListBox#1{%
14510 \HyField@PDFChoices{#1}%
14511 \setbox\pdfm@box=\hbox{%
14512 \MakeChoiceField{\Fld@width}{\Fld@height}%
14513 }%
14514 \leavevmode
14515 \Hy@escapeform\PDFForm@List
14516 \HyField@AdvanceAnnotCount
14517 \@pdfm@mark{%
14518 ann @list\HyField@TheAnnotCount\space
14519 \dvipdfm@setdim
14520 <<\PDFForm@List>>%
14521 }%
14522 \unhbox\pdfm@box
14523 \HyField@AddToFields{list}%
14524 }

```

\@PushButton

```

14525 \def\@PushButton[#1]#2{% parameters, label
14526 \def\Fld@name{#2}%
14527 \begingroup
14528 \expandafter\HyField@SetKeys\expandafter{%

```

```

14529     \DefaultOptionsofPushButton,#1%
14530 }%
14531 \PDFForm@Name
14532 \ifHy@pdfa
14533   \Hy@Error{%
14534     PDF/A: Push button with JavaScript is prohibited%
14535   }\@ehc
14536   \LayoutPushButtonField{%
14537     \leavevmode
14538     \MakeButtonField{#2}%
14539   }%
14540 \else
14541   \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14542   \HyField@FlagsPushButton
14543   \ifFld@hidden\def\Fld@width{1sp}\fi
14544   \HyField@AdvanceAnnotCount
14545   \LayoutPushButtonField{%
14546     \leavevmode
14547     \Hy@escapeform\PDFForm@Push
14548     \@pdfm@mark{%
14549       ann @push\HyField@TheAnnotCount\space
14550       \dvipdfm@setdim
14551       <<\PDFForm@Push>>%
14552     }%
14553   }%
14554   \unhbox\pdfm@box
14555   \HyField@AddToFields{push}%
14556 \fi
14557 \endgroup
14558 }

\@Submit
14559 \def\@Submit[#1]#2{%
14560   \def\Fld@width{\DefaultWidthofSubmit}%
14561   \def\Fld@height{\DefaultHeightofSubmit}%
14562   \begingroup
14563     \expandafter\HyField@SetKeys\expandafter{%
14564       \DefaultOptionsofSubmit,#1%
14565     }%
14566     \HyField@FlagsPushButton
14567     \HyField@FlagsSubmit
14568     \ifFld@hidden\def\Fld@width{1sp}\fi
14569     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14570     \leavevmode
14571     \Hy@escapeform\PDFForm@Submit
14572     \HyField@AdvanceAnnotCount
14573     \@pdfm@mark{%
14574       ann @submit\HyField@TheAnnotCount\space
14575       \dvipdfm@setdim
14576       <<\PDFForm@Submit>>%
14577     }%
14578     \unhbox\pdfm@box%
14579     \HyField@AddToFields{submit}%
14580   \endgroup
14581 }

\@Reset

```

```

14582 \def\@Reset[#1]#2{%
14583   \def\Fld@width{\DefaultWidthofReset}%
14584   \def\Fld@height{\DefaultHeightofReset}%
14585   \begingroup
14586     \expandafter\HyField@SetKeys\expandafter{%
14587       \DefaultOptionsofReset,#1%
14588     }%
14589     \leavevmode
14590     \ifHy@pdfa
14591       \Hy@Error{%
14592         PDF/A: Reset action is prohibited%
14593       }\@ehc
14594       \MakeButtonField{#2}%
14595     \else
14596       \HyField@FlagsPushButton
14597       \ifFld@hidden\def\Fld@width{1sp}\fi
14598       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14599       \Hy@escapeform\PDFForm@Reset
14600       \HyField@AdvanceAnnotCount
14601       \@pdfm@mark{%
14602         ann @reset\HyField@TheAnnotCount\space
14603         \dvipdfm@setdim
14604         <<\PDFForm@Reset>>%
14605       }%
14606       \unhbox\pdfm@box
14607       \HyField@AddToFields{reset}%
14608     \fi
14609   \endgroup
14610 }

```

\@CheckBox

```

14611 \def\@CheckBox[#1]#2{% parameters, label
14612   \def\Fld@name{#2}%
14613   \def\Fld@default{0}%
14614   \begingroup
14615     \def\Fld@width{\DefaultWidthofCheckBox}%
14616     \def\Fld@height{\DefaultHeightofCheckBox}%
14617     \expandafter\HyField@SetKeys\expandafter{%
14618       \DefaultOptionsofCheckBox,#1%
14619     }%
14620     \PDFForm@Name
14621     \HyField@FlagsCheckBox
14622     \ifFld@hidden\def\Fld@width{1sp}\fi
14623     \setbox\pdfm@box=\hbox{%
14624       \MakeCheckField{\Fld@width}{\Fld@height}%
14625     }%
14626     \HyField@AdvanceAnnotCount
14627     \LayoutCheckField{#2}{%
14628       \leavevmode
14629       \Hy@escapeform\PDFForm@Check
14630       \@pdfm@mark{%
14631         ann @check\HyField@TheAnnotCount\space
14632         \dvipdfm@setdim
14633         <<\PDFForm@Check>>%
14634       }%
14635       \unhbox\pdfm@box
14636       \HyField@AddToFields{check}%
14637     }%

```

```

14638 \endgroup
14639 }

14640 \def\Hy@FormObjects{%
14641 \@pdfm@mark{obj @OBJpdfdocencoding%
14642 <<%
14643 /Type/Encoding%
14644 /Differences[%
14645 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14646 39/quotesingle %
14647 96/grave %
14648 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14649 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14650 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14651 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14652 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14653 164/currency %
14654 166/brokenbar %
14655 168/dieresis/copyright/ordfeminine %
14656 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14657 /twosuperior/threesuperior/acute/mu %
14658 183/periodcentered/cedilla/onesuperior/ordmasculine %
14659 188/onequarter/onehalf/threequarters %
14660 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14661 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14662 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14663 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14664 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14665 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14666 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14667 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14668 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14669 /thorn/ydieresis%
14670 ]%
14671 >>%
14672 }%
14673 \@pdfm@mark{obj @OBJZaDb%
14674 <<%
14675 /Type/Font%
14676 /Subtype/Type1%
14677 /Name/ZaDb%
14678 /BaseFont/ZapfDingbats%
14679 >>%
14680 }%
14681 \@pdfm@mark{obj @OBJHelv%
14682 <<%
14683 /Type/Font%
14684 /Subtype/Type1%
14685 /Name/Helv%
14686 /BaseFont/Helvetica%
14687 /Encoding @OBJpdfdocencoding%
14688 >>%
14689 }%
14690 \global\let\Hy@FormObjects\relax
14691 }
14692 </dvipdfm | xetex>

```


48.6 Common forms part

14693 $\langle *pdfform \rangle$

$\backslash Fld@pageobjref$

14694 $\backslash providecommand*{\backslash Fld@pageobjref}\{\}$

$\backslash Hy@escapestring$

```
14695 \begingroup\expandafter\expandafter\expandafter\endgroup
14696 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14697   \let\Hy@escapestring\@firstofone
14698   \def\Hy@escapeform#1{%
14699     \ifHy@pdfescapeform
14700       \def\Hy@escapestring##1{%
14701         \noexpand\Hy@escapestring{\noexpand##1}%
14702       }%
14703     \edef\Hy@temp{##1}%
14704     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14705     \def\Hy@escapestring##1{%
14706       \@ifundefined{Hy@esc@\string##1}{%
14707         ##1%
14708         \ThisShouldNotHappen
14709       }{%
14710         \csname Hy@esc@\string##1\endcsname
14711       }%
14712     }%
14713   \else
14714     \let\Hy@escapestring\@firstofone
14715   \fi
14716 }%
14717 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14718   \ifx\#3\%
14719     \else
14720       \expandafter
14721       \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14722       \ltx@ReturnAfterFi{%
14723         \Hy@@escapeform#3\@nil
14724       }%
14725     \fi
14726   }%
14727 \else
14728   \def\Hy@escapeform#1{%
14729     \ifHy@pdfescapeform
14730       \let\Hy@escapestring\pdfescapestring
14731     \else
14732       \let\Hy@escapestring\@firstofone
14733     \fi
14734   }%
14735   \Hy@escapeform{}%
14736 \fi
```

$\backslash PDFForm@Name$

```
14737 \def\PDFForm@Name{%
14738   \PDFForm@@Name\Fld@name
14739   \ifx\Fld@altname\relax
14740     \else
14741       \PDFForm@@Name\Fld@altname
14742     \fi
```

```

14743 \ifx\Fld@mappingname\relax
14744 \else
14745 \PDFForm@@Name\Fld@mappingname
14746 \fi
14747 }

```

\PDFForm@@Name

```

14748 \def\PDFForm@@Name#1{%
14749 \begingroup
14750 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14751 \ifHy@unicode
14752 \Hy@unicodetrue
14753 \fi
14754 \fi
14755 \HyPsd@XeTeXBigCharstrue
14756 \pdfstringdef\Hy@gtemp#1%
14757 \endgroup
14758 \let#1\Hy@gtemp
14759 }

```

\Fld@additionalactions

```

14760 \def\Fld@@additionalactions{%
K input (keystroke) format
14761 \ifx\Fld@keystroke@code\@empty
14762 \else
14763 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14764 \fi
F display format
14765 \ifx\Fld@format@code\@empty
14766 \else
14767 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14768 \fi
V validation
14769 \ifx\Fld@validate@code\@empty
14770 \else
14771 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14772 \fi
C calculation
14773 \ifx\Fld@calculate@code\@empty
14774 \else
14775 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14776 \fi
Fo receiving the input focus
14777 \ifx\Fld@onfocus@code\@empty
14778 \else
14779 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14780 \fi
Bl loosing the input focus (blurred)
14781 \ifx\Fld@onblur@code\@empty
14782 \else
14783 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14784 \fi

```

D pressing the mouse button (down)

```
14785 \ifx\Fld@onmousedown@code\@empty
14786 \else
14787 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14788 \fi
```

U releasing the mouse button (up)

```
14789 \ifx\Fld@onmouseup@code\@empty
14790 \else
14791 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14792 \fi
```

E cursor enters the annotation's active area.

```
14793 \ifx\Fld@onenter@code\@empty
14794 \else
14795 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14796 \fi
```

X cursor exits the annotation's active area.

```
14797 \ifx\Fld@onexit@code\@empty
14798 \else
14799 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14800 \fi
14801 }
14802 \def\Fld@additionalactions{%
14803 \if-\Fld@@additionalactions-%
14804 \else
14805 \ifHy@pdfa
14806 \else
14807 /AA<<\Fld@@additionalactions>>%
14808 \fi
14809 \fi
14810 }
```

\Fld@annotnames

```
14811 \def\Fld@annotnames{%
14812 /T(\Fld@name)%
14813 \ifx\Fld@altname\relax
14814 \else
14815 /TU(\Fld@altname)%
14816 \fi
14817 \ifx\Fld@mappingname\relax
14818 \else
14819 /TM(\Fld@mappingname)%
14820 \fi
14821 }
```

\PDFForm@Check

```
14822 \def\PDFForm@Check{%
14823 /Subtype/Widget%
14824 \Fld@annotflags
14825 \Fld@pageobjref
14826 \Fld@annotnames
14827 /FT/Btn%
14828 \Fld@flags
14829 /Q \Fld@align
14830 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14831 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
```

```

14832 /MK<<%
14833   \ifnum\Fld@rotation=\z@
14834   \else
14835     /R \Fld@rotation
14836   \fi
14837   \ifx\Fld@bordercolor\relax
14838   \else
14839     /BC[\Fld@bordercolor]%
14840   \fi
14841   \ifx\Fld@bcolor\relax
14842   \else
14843     /BG[\Fld@bcolor]%
14844   \fi
14845   /CA(\Hy@escapestring{\Fld@cbsymbol})%
14846 >>%
14847 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14848   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14849 /H/P%
14850 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14851 \Fld@additionalactions
14852 }

```

\PDFForm@Push

```

14853 \ifHy@pdfa
14854 \else
14855   \def\PDFForm@Push{%
14856     /Subtype/Widget%
14857     \Fld@annotflags
14858     \Fld@pageobjref
14859     \Fld@annotnames
14860     /FT/Btn%
14861     \Fld@flags
14862     /H/P%
14863     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14864     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14865       \ifx\Fld@bordercolor\relax\else 1\fi
14866       \space
14867     \else
14868       /MK<<%
14869       \ifnum\Fld@rotation=\z@
14870       \else
14871         /R \Fld@rotation
14872       \fi
14873       \ifx\Fld@bordercolor\relax
14874       \else
14875         /BC[\Fld@bordercolor]%
14876       \fi
14877       >>%
14878     \fi
14879     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14880     \Fld@additionalactions
14881   }%
14882 \fi

```

\PDFForm@List

```

14883 \def\PDFForm@List{%
14884   /Subtype/Widget%

```

```

14885 \Fld@annotflags
14886 \Fld@pageobjref
14887 \Fld@annotnames
14888 /FT/Ch%
14889 \Fld@flags
14890 /Q \Fld@align
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     \ifx\Fld@bcolor\relax \else 1\fi
14895     \space
14896 \else
14897 /MK<<%
14898     \ifnum\Fld@rotation=\z@
14899     \else
14900     /R \Fld@rotation
14901     \fi
14902     \ifx\Fld@bordercolor\relax
14903     \else
14904     /BC[\Fld@bordercolor]%
14905     \fi
14906     \ifx\Fld@bcolor\relax
14907     \else
14908     /BG[\Fld@bcolor]%
14909     \fi
14910 >>%
14911 \fi
14912 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14913     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14914 \Fld@choices
14915 \Fld@additionalactions
14916 }

```

\PDFForm@Radio

```

14917 \def\PDFForm@Radio{%
14918 /Subtype/Widget%
14919 \Fld@annotflags
14920 \Fld@pageobjref
14921 \Fld@annotnames
14922 /FT/Btn%
14923 \Fld@flags
14924 /H/P%
14925 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14926 /MK<<%
14927     \ifnum\Fld@rotation=\z@
14928     \else
14929     /R \Fld@rotation
14930     \fi
14931     \ifx\Fld@bordercolor\relax
14932     \else
14933     /BC[\Fld@bordercolor]%
14934     \fi
14935     \ifx\Fld@bcolor\relax
14936     \else
14937     /BG[\Fld@bcolor]%
14938     \fi
14939 /CA(\Hy@escapestring{\Fld@radiosymbol})%
14940 >>%

```

```

14941 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14942 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14943 \ifx\Fld@default\@empty
14944 /V/Off%
14945 /DV/Off%
14946 \else
14947 /V/\Fld@default
14948 /DV/\Fld@default
14949 \fi
14950 \Fld@additionalactions
14951 }

```

\PDFForm@Text

```

14952 \def\PDFForm@Text{%
14953 /Subtype/Widget%
14954 \Fld@annotflags
14955 \Fld@pageobjref
14956 \Fld@annotnames
14957 /FT/Tx%
14958 \Fld@flags
14959 /Q \Fld@align
14960 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14961 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14962 \ifx\Fld@bordercolor\relax\else 1\fi
14963 \ifx\Fld@bcolor\relax \else 1\fi
14964 \space
14965 \else
14966 /MK<<%
14967 \ifnum\Fld@rotation=\z@
14968 \else
14969 /R \Fld@rotation
14970 \fi
14971 \ifx\Fld@bordercolor\relax
14972 \else
14973 /BC[\Fld@bordercolor]%
14974 \fi
14975 \ifx\Fld@bcolor\relax
14976 \else
14977 /BG[\Fld@bcolor]%
14978 \fi
14979 >>%
14980 \fi
14981 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14982 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14983 /DV(\Hy@escapestring{\Fld@default})%
14984 /V(\Hy@escapestring{\Fld@value})%
14985 \Fld@additionalactions
14986 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14987 }

```

\PDFForm@Submit

```

14988 \def\PDFForm@Submit{%
14989 /Subtype/Widget%
14990 \Fld@annotflags
14991 \Fld@pageobjref
14992 \Fld@annotnames

```

```

14993 /FT/Btn%
14994 \Fld@flags
14995 /H/P%
14996 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14997 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14998 \ifx\Fld@bordercolor\relax\else 1\fi
14999 \space
15000 \else
15001 /MK<<%
15002 \ifnum\Fld@rotation=\z@
15003 \else
15004 /R \Fld@rotation
15005 \fi
15006 \ifx\Fld@bordercolor\relax
15007 \else
15008 /BC[\Fld@bordercolor]%
15009 \fi
15010 >>%
15011 \fi
15012 /A<<%
15013 /S/SubmitForm%
15014 /F<<%
15015 /FS/URL%
15016 /F(\Hy@escapestring{\Form@action})%
15017 >>%
15018 \Fld@submitflags
15019 >>%
15020 \Fld@additionalactions
15021 }

```

\PDFForm@Reset

```

15022 \ifHy@pdfa
15023 \else
15024 \def\PDFForm@Reset{%
15025 /Subtype/Widget%
15026 \Fld@annotflags
15027 \Fld@pageobjref
15028 \Fld@annotnames
15029 /FT/Btn%
15030 \Fld@flags
15031 /H/P%
15032 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
15033 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15034 \ifx\Fld@bordercolor\relax\else 1\fi
15035 \space
15036 \else
15037 /MK<<%
15038 \ifnum\Fld@rotation=\z@
15039 \else
15040 /R \Fld@rotation
15041 \fi
15042 \ifx\Fld@bordercolor\relax
15043 \else
15044 /BC[\Fld@bordercolor]%
15045 \fi
15046 % /CA (Clear)
15047 % /AC (Done)
15048 >>%

```

```

15049 \fi
15050 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15051 /A<</S/ResetForm>>%
15052 \Fld@additionalactions
15053 }%
15054 \fi

15055 </pdfform>
15056 <*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`

```

15057 \def\phantomsection{%
15058 \Hy@MakeCurrentHrefAuto{section*}%
15059 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15060 }
15061 </package>

```

49.1 Bookmarks

```
15062 <*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 -T_EX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -T_EX'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.

```

15063 \def\Hy@writebookmark#1#2#3#4#5{%
15064 % section number, text, label, level, file
15065 \ifx\WriteBookmarks\relax%
15066 \else
15067 \ifnum#4>\Hy@bookmarksdepth\relax
15068 \else
15069 \@@@writetorep{#1}{#2}{#3}{#4}{#5}%
15070 \fi
15071 \fi

```



```

15072 }
15073 \def\Hy@currentbookmarklevel{0}
15074 \def\Hy@numberline#1{#1 }
15075 \def\@writetorep#1#2#3#4#5{%
15076   \begingroup
15077     \edef\Hy@tempa{#5}%
15078     \ifx\Hy@tempa\Hy@bookmarkstype
15079       \edef\Hy@level{#4}%
15080       \ifx\Hy@levelcheck Y%
15081         \@tempcnta\Hy@level\relax
15082         \advance\@tempcnta by -1 %
15083         \ifnum\Hy@currentbookmarklevel<\@tempcnta
15084           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15085           \advance\@tempcnta by 1 %
15086           \Hy@Warning{%
15087             Difference (\the\@tempcnta) between bookmark levels is %
15088             greater \MessageBreak than one, level fixed%
15089           }%
15090           \@tempcnta\Hy@currentbookmarklevel
15091           \advance\@tempcnta by 1 %
15092           \edef\Hy@level{\the\@tempcnta}%
15093         \fi
15094       \else
15095         \global\let\Hy@levelcheck Y%
15096       \fi
15097       \global\let\Hy@currentbookmarklevel\Hy@level
15098       \@tempcnta\Hy@level\relax
15099       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15100       \advance\@tempcnta by -1 %
15101       \edef\Hy@tempa{#3}%
15102       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15103       \ifx\Hy@tempa\Hy@tempb
15104         \Hy@Warning{%
15105           The anchor of a bookmark and its parent's must not%
15106           \MessageBreak be the same. Added a new anchor%
15107         }%
15108       \phantomsection
15109     \fi
15110     \ifHy@bookmarksnumbered
15111       \let\numberline\Hy@numberline
15112       \let\booknumberline\Hy@numberline
15113       \let\partnumberline\Hy@numberline
15114       \let\chapternumberline\Hy@numberline
15115     \else
15116       \let\numberline\@gobble
15117       \let\booknumberline\@gobble
15118       \let\partnumberline\@gobble
15119       \let\chapternumberline\@gobble
15120     \fi
15121     \HyPsd@XeTeXBigCharstrue
15122     \pdfstringdef\Hy@tempa{#2}%
15123     \HyPsd@SanitizeForOutFile\Hy@tempa
15124     \if@filesw
15125       \stepcounter{bookmark@seq@number}%
15126       \@ifundefined{@outlinefile}{%
15127         }{%
15128           \protected@write\@outlinefile{}{%

```

```

15129         \protect\BOOKMARK
15130         [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15131         {\Hy@tempa}{\Hy@tempb}%
15132         \@percentchar\space\thebookmark@seq@number
15133     }%
15134 }%
15135 \fi
15136 \fi
15137 \endgroup
15138 }
15139 \newcounter{bookmark@seq@number}

15140 \begingroup
15141 \lccode`=(`{%
15142 \lccode`=)`}%
15143 \lccode`1=\z@
15144 \lccode`2=\z@
15145 \lccode`3=\z@
15146 \lccode`5=\z@
15147 \lccode`7=\z@
15148 \lccode`\#=\z@
15149 \lccode``=\z@
15150 \lccode`\{=\z@
15151 \lccode`\}= \z@
15152 \lowercase{%
15153 \endgroup
15154 \def\HyPsd@SanitizeForOutFile#1{%
15155     \@onelevel@sanitize\Hy@tempa
15156     \escapechar`\\%
15157     \edef\Hy@tempa{%
15158         \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
15159     }%
15160     \edef\Hy@tempa{%
15161         \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
15162     }%
15163 }%
15164 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15165     #1%
15166     \ifx\#2\\%
15167         \expandafter\ltx@gobble
15168     \else
15169         \expandafter\ltx@firstofone
15170     \fi
15171     {%
15172         \string\173%
15173         \HyPsd@SanitizeOut@BraceLeft#2\@nil
15174     }%
15175 }%
15176 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15177     #1%
15178     \ifx\#2\\%
15179         \expandafter\ltx@gobble
15180     \else
15181         \expandafter\ltx@firstofone
15182     \fi
15183     {%
15184         \string\175%
15185         \HyPsd@SanitizeOut@BraceRight#2\@nil

```

```

15186 }%
15187 }%
15188 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

15189 \newcommand{\currentpdfbookmark}{%
15190 \pdfbookmark[\Hy@currentbookmarklevel]%
15191 }
15192 \newcommand{\subpdfbookmark}{%
15193 \@tempcnta\Hy@currentbookmarklevel
15194 \Hy@StepCount\@tempcnta
15195 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15196 }
15197 \newcommand{\belowpdfbookmark}[2]{%
15198 \@tempcnta\Hy@currentbookmarklevel
15199 \Hy@StepCount\@tempcnta
15200 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15201 \advance\@tempcnta by -1 %
15202 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15203 }

```

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.

```

15204 \renewcommand\pdfbookmark[3][0]{%
15205 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
15206 \hyper@anchorstart{#3.#1}\hyper@anchorend
15207 }
15208 \def\BOOKMARK{%
15209 \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
15210 }
15211 \def\@BOOKMARK[#1]{%
15212 \@ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
15213 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfopdf` macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

15214 \RequirePackage{rerunfilecheck}[2009/12/10]
15215 \def\Hy@OutlineRerunCheck{%
15216 \RerunFileCheck{\jobname.out}{%
15217 \immediate\closeout\@outlinefile
15218 }{%
15219 Rerun to get outlines right\MessageBreak
15220 or use package `bookmark'%
15221 }%
15222 }

```

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.

```

15223 {*vtex}
15224 \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.

15225 \begingroup
15226 \catcode`\'=12 %
15227 \ifnum\Hy@VTeXversion<650 %
15228 \catcode`\#=12 %
15229 \gdef\hv@pdf@char#1#2#3{%
15230 \char
15231 \ifcase'#1#2#3 %
15232 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15233 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15234 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
15235 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15236 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15237 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15238 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15239 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15240 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15241 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15242 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15243 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15244 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15245 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15246 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15247 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15248 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15249 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15250 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15251 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15252 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15253 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15254 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15255 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15256 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15257 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15258 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15259 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15260 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15261 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15262 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15263 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15264 \fi
15265 }%
15266 \else
15267 \gdef\hv@pdf@char{\char'}%
15268 \fi
15269 \endgroup

\@@BOOKMARK

15270 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15271 \expandafter\edef\csname @count@#3\endcsname{%
15272 \the\@serial@counter
15273 }%

```

```

15274 \edef\@mycount{\the\@serial@counter}%
15275 \Hy@StepCount\@serial@counter
15276 \edef\@parcount{%
15277   \expandafter\ifx\csname @count@#5\endcsname\relax
15278     0%
15279   \else
15280     \csname @count@#5\endcsname
15281   \fi
15282 }%
15283 \immediate\special{%
15284   !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15285   s=\ifx#2-c\else o\fi,t=#4%
15286 }%
15287 }%

```

\ReadBookmarks

```

15288 \def\ReadBookmarks{%
15289   \begingroup
15290   \def\0{\hv@pdf@char 0}%
15291   \def\1{\hv@pdf@char 1}%
15292   \def\2{\hv@pdf@char 2}%
15293   \def\3{\hv@pdf@char 3}%
15294   \def\({}%
15295   \def\)}%
15296   \def\do##1{%
15297     \ifnum\catcode`##1=\active
15298       \@makeother##1%
15299     \else
15300       \ifnum\catcode`##1=6 %
15301         \@makeother##1%
15302       \fi
15303     \fi
15304   }%
15305   \dospecials
15306   \Hy@safe@activetrue
15307   \InputIfFileExists{\jobname.out}{\}{}%
15308 \endgroup
15309 \ifx\WriteBookmarks\relax
15310 \else
15311   \if@filesw
15312     \newwrite\@outlinefile
15313     \Hy@OutlineRerunCheck
15314     \immediate\openout\@outlinefile=\jobname.out\relax
15315     \ifHy@typexml
15316       \immediate\write\@outlinefile{<relaxxml>\relax}%
15317     \fi
15318   \fi
15319 \fi
15320 }

15321 </vtex>
15322 <!*vtex>
15323 \def\ReadBookmarks{%
15324   \pdf@ifdraftmode{\}{%
15325     \begingroup
15326     \def\do##1{%
15327       \ifnum\catcode`##1=\active

```

```

15328      \@makeother##1%
15329      \else
15330      \ifnum\catcode`##1=6 %
15331      \@makeother##1%
15332      \fi
15333      \fi
15334    }%
15335    \dospecials
15336    \Hy@safe@activetrue
15337    \escapechar=`\%
15338    \def\@BOOKMARK[##1][##2]##3##4##5{%
15339      \calc@bm@number{##5}%
15340    }%
15341    \InputIfFileExists{\jobname.out}{\{}}{}%
15342    \ifx\WriteBookmarks\relax
15343      \global\let\WriteBookmarks\relax
15344    \fi
15345    \def\@BOOKMARK[##1][##2]##3##4##5{%
15346      \def\Hy@temp{##4}%
15347    (*pdfTeX)
15348      \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15349      \Hy@OutlineName{}\Hy@pstringName{%
15350        ##2\check@bm@number{##3}%
15351      }{%
15352        \expandafter\strip@prefix\meaning\Hy@temp
15353      }%
15354    \}

```

```

15385     \def\WriteBookmarks{0}%
15386     \InputIfFileExists{\jobname.out}{-}{-}%
15387     \endgroup
15388     %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
15389     \endgroup
15390 }%
15391 \ifx\WriteBookmarks\relax
15392 \else
15393   \if@files
15394     \newwrite\@outlinefile
15395     \Hy@OutlineRerunCheck
15396     \immediate\openout\@outlinefile=\jobname.out\relax
15397     \ifHy@typexml
15398       \immediate\write\@outlinefile{<relaxxml>\relax}%
15399     \fi
15400   \fi
15401 \fi
15402 }
15403 <*pdfTeX>
15404 \def\Hy@OutlineName#1#2#3#4{%
15405   \pdfoutline goto name{#2}count#3{#4}%
15406 }
15407 </pdfTeX>
15408 \def\check@bm@number#1{%
15409   \expandafter\ifx\csname B_#1\endcsname\relax
15410     0%
15411   \else
15412     \csname B_#1\endcsname
15413   \fi
15414 }
15415 \def\calc@bm@number#1{%
15416   \@tempcnta=\check@bm@number{#1}\relax
15417   \advance\@tempcnta by 1 %
15418   \expandafter\xdef\csname B_#1\endcsname{the\@tempcnta}%
15419 }
15420 </!vTeX>

15421 \ifHy@implicit
15422 \else
15423   \expandafter\endinput
15424 \fi

15425 </outlines>
15426 <*outlines | hypertex>

15427 \newlength\Hy@SectionHShift
15428 \def\Hy@SectionAnchorHref#1{%
15429   \ifx\protect\@typeset@protect
15430     \Hy@@@SectionAnchor{#1}%
15431   \fi
15432 }
15433 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
15434   \leavevmode
15435   \hbox to 0pt{%
15436     \kern-\Hy@SectionHShift
15437     \Hy@raisedlink{%
15438       \hyper@anchorstart{#1}\hyper@anchorend
15439     }%
15440     \hss

```

```

15441 }%
15442 }
15443 \let\H@old@ssect\@ssect
15444 \def\@ssect#1#2#3#4#5{%
15445   \Hy@MakeCurrentHrefAuto{section*}%
15446   \setlength{\Hy@SectionHShift}{#1}%
15447   \begingroup
15448     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15449     \toks\tw@\expandafter{%
15450       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15451       #5%
15452     }%
15453   \edef\x{\endgroup
15454     \the\toks@{\the\toks\tw@}}%
15455   }\x
15456 }
15457 \let\H@old@schapter\@schapter
15458 \def\@schapter#1{%
15459   \begingroup
15460     \let\@mkboth\@gobbletwo
15461     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15462     \Hy@raisedlink{%
15463       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15464     }%
15465   \endgroup
15466   \H@old@schapter{#1}%
15467 }

```

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:

```

15468 \ltx@ifundefined{@chapter}{}{%
15469   \let\Hy@org@chapter\@chapter
15470   \def\@chapter{%
15471     \def\Hy@next{%
15472       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15473       \Hy@raisedlink{%
15474         \hyper@anchorstart{\@currentHref}\hyper@anchorend
15475       }%
15476     }%
15477     \ifnum\c@secnumdepth>\m@ne
15478       \ltx@ifundefined{if@mainmatter}%
15479       \iftrue{\csname if@mainmatter\endcsname}%
15480       \let\Hy@next\relax
15481     \fi
15482     \fi
15483     \Hy@next
15484     \Hy@org@chapter
15485   }%
15486 }
15487 \let\H@old@part\@part
15488 \begingroup\expandafter\expandafter\expandafter\endgroup
15489 \expandafter\ifx\csname chapter\endcsname\relax
15490   \let\Hy@secnum@part\z@
15491 \else
15492   \let\Hy@secnum@part\m@ne
15493 \fi

```



```

15494 \def\@part{%
15495   \ifnum\Hy@secnum@part>\c@secnumdepth
15496     \phantomsection
15497   \fi
15498   \H@old@part
15499 }

15500 \let\H@old@spart\@spart
15501 \def\@spart#1{%
15502   \Hy@MakeCurrentHrefAuto{part*}%
15503   \Hy@raisedlink{%
15504     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15505   }%
15506   \H@old@spart{#1}%
15507 }

15508 \let\H@old@sect\@sect
15509 \def\@sect#1#2#3#4#5#6[#7]#8{%
15510   \ifnum #2>\c@secnumdepth
15511     \expandafter\@firstoftwo
15512   \else
15513     \expandafter\@secondoftwo
15514   \fi
15515   {%
15516     \Hy@MakeCurrentHrefAuto{section*}%
15517     \setlength{\Hy@SectionHShift}{#3}%
15518     \begingroup
15519       \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15520       \toks\tw@\expandafter{%
15521         \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15522         #8%
15523       }%
15524       \edef\x{\endgroup
15525         \the\toks@{\the\toks\tw@}}%
15526       }\x
15527   }{%
15528     \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15529   }%
15530 }

15531 </outlines | hypertex>
15532 < *outlines>

15533 \expandafter\def\csname Parent-4\endcsname{}
15534 \expandafter\def\csname Parent-3\endcsname{}
15535 \expandafter\def\csname Parent-2\endcsname{}
15536 \expandafter\def\csname Parent-1\endcsname{}
15537 \expandafter\def\csname Parent0\endcsname{}
15538 \expandafter\def\csname Parent1\endcsname{}
15539 \expandafter\def\csname Parent2\endcsname{}
15540 \expandafter\def\csname Parent3\endcsname{}
15541 \expandafter\def\csname Parent4\endcsname{}

15542 </outlines>

```

50 Compatibility with koma-script classes

```
15543 < *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.

```

15544 \def\Hy@tempa{%
15545   \def\@addchap[##1]##2{%
15546     \typeout{##2}%
15547     \if@twoside
15548       \@mkboth{##1}{}%
15549     \else
15550       \@mkboth{}{##1}%
15551     \fi
15552     \addtocontents{lof}{\protect\addvspace{10\p@}}%
15553     \addtocontents{lot}{\protect\addvspace{10\p@}}%
15554     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15555     \Hy@raisedlink{%
15556       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15557     }%
15558     \if@twocolumn
15559       \@topnewpage[\@makeschapterhead{##2}]%
15560     \else
15561       \@makeschapterhead{##2}%
15562       \@afterheading
15563     \fi
15564     \addcontentsline{toc}{chapter}{##1}%
15565   }%
15566 }
15567 \@ifclassloaded{scrbook}{%
15568   \@ifclasslater{scrbook}{2001/01/01}{%
15569     \let\Hy@tempa\@empty
15570   }{}%
15571 }{%
15572   \@ifclassloaded{scrreprt}{%
15573     \@ifclasslater{scrreprt}{2001/01/01}{%
15574       \let\Hy@tempa\@empty
15575     }{}%
15576   }{%
15577     \let\Hy@tempa\@empty
15578   }%
15579 }%
15580 \Hy@tempa
15581 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15582 <*pd1enc>
15583 \DeclareFontEncoding{PD1}{}{}

Accents
15584 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15585 \DeclareTextAccent{\'}{PD1}{\textacute}
15586 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15587 \DeclareTextAccent{\~}{PD1}{\texttilde}
15588 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}

```

```

15589 \DeclareTextAccent{\r}{PD1}{\textring}
15590 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15591 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15592 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15593 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
15594 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15595 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15596 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
15597 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15598 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
15599 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15600 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
15601 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
15602 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15603 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15604 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15605 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
15606 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15607 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15608 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15609 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15610 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15611 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15612 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15613 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15614 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15615 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15616 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15617 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15618 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15619 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15620 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15621 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15622 \DeclareTextCommand{\newtie}{PD1}[1]{%
15623   \TextSymbolUnavailable{\newtie{#1}}#1%
15624 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

15625 % U+0009 (CHARACTER TABULATION)
15626 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15627 % U+000A (LINE FEED)
15628 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15629 % U+000D (CARRIAGE RETURN)
15630 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15631 % U+02D8 BREVE; breve
15632 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15633 % U+02C7 CARON; caron
15634 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15635 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15636 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15637 % U+02D9 DOT ABOVE; dotaccent
15638 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15639 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15640 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15641 % U+02DB OGONEK; ogonek
15642 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB

```

15643 % U+02DA RING ABOVE; ring
 15644 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 15645 % U+02DC SMALL TILDE; ilde, *tilde
 15646 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 15647 % U+0022 QUOTATION MARK; quotedbl
 15648 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
 15649 % U+0023 NUMBER SIGN; numbersign
 15650 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 15651 % U+0024 DOLLAR SIGN; dollar
 15652 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15653 % U+0025 PERCENT SIGN; percent
 15654 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15655 % U+0026 AMPERSAND; ampersand
 15656 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15657 % U+0028 LEFT PARENTHESIS; parenleft
 15658 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 15659 % U+0029 RIGHT PARENTHESIS; parenright
 15660 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 15661 % U+002E FULL STOP; period
 15662 \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
 15663 % U+003C LESS-THAN SIGN; less
 15664 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15665 % U+003E GREATER-THAN SIGN; greater
 15666 \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
 15667 % U+005C REVERSE SOLIDUS; backslash
 15668 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15669 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15670 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15671 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15672 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15673 % U+005F LOW LINE; underscore

15674 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15675 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15676 % U+0060 GRAVE ACCENT; grave
 15677 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15678 % U+0069 LATIN SMALL LETTER I; i
 15679 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15680 % U+007B LEFT CURLY BRACKET; braceleft
 15681 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15682 % U+007C VERTICAL LINE; *bar, verticalbar
 15683 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15684 % U+007D RIGHT CURLY BRACKET; braceright
 15685 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15686 % U+007E TILDE; asciitilde
 15687 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15688 % U+2022 BULLET; bullet
 15689 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15690 % U+2020 DAGGER; dagger
 15691 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15692 % U+2021 DOUBLE DAGGER; daggerdbl, \ddagger (LaTeX)
 15693 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15694 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15695 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15696 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15697 % U+2014 EM DASH; emdash
 15698 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15699 % U+2013 EN DASH; endash
 15700 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15701 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15702 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15703 % U+2044 FRACTION SLASH; fraction
 15704 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15705 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 15706 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 15707 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 inglright
 15708 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 15709 % U+2212 MINUS SIGN; minus
 15710 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15711 % U+2030 PER MILLE SIGN; perthousand
 15712 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15713 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15714 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15715 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15716 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15717 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15718 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15719 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15720 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018

15721 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15722 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15723 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15724 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15725 % U+2122 TRADE MARK SIGN; trademark
 15726 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15727 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15728 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15729 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15730 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15731 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15732 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15733 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15734 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15735 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15736 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15737 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15738 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
 15739 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15740 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15741 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15742 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15743 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15744 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15745 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15746 % U+0153 LATIN SMALL LIGATURE OE; oe
 15747 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15748 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15749 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15750 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15751 \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.
 15752 % U+20AC EURO SIGN; *Euro, euro
 15753 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15754 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15755 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15756 % U+00A2 CENT SIGN; cent
 15757 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15758 % U+00A3 POUND SIGN; sterling
 15759 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15760 % U+00A4 CURRENCY SIGN; currency
 15761 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15762 % U+00A5 YEN SIGN; yen
 15763 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15764 % U+00A6 BROKEN BAR; brokenbar
 15765 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15766 % U+00A7 SECTION SIGN; section
 15767 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15768 % U+00A8 DIAERESIS; dieresis
 15769 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15770 % U+00A9 COPYRIGHT SIGN; copyright
 15771 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15772 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15773 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15774 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft

15775 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
15776 % U+00AC NOT SIGN; logicalnot
15777 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
15778 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
15779 % U+00AE REGISTERED SIGN; registered
15780 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
15781 % U+00AF MACRON; *macron, overscore
15782 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
15783 % U+00B0 DEGREE SIGN; degree
15784 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15785 % U+00B1 PLUS-MINUS SIGN; plusminus
15786 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15787 % U+00B2 SUPERSCRIFT TWO; twosuperior
15788 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15789 % U+00B3 SUPERSCRIFT THREE; threesuperior
15790 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15791 % U+00B4 ACUTE ACCENT; acute
15792 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15793 % U+00B5 MICRO SIGN; mu, mul
15794 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15795 % U+00B6 PILCROW SIGN; paragraph
15796 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15797 % U+00B7 MIDDLE DOT; middot, *periodcentered
15798 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15799 % U+00B8 CEDILLA; cedilla
15800 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15801 % U+00B9 SUPERSCRIFT ONE; onesuperior
15802 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15803 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15804 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15805 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15806 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15807 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15808 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15809 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15810 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15811 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15812 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15813 % U+00BF INVERTED QUESTION MARK; questiondown
15814 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15815 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15816 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15817 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15818 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15819 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15820 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15821 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15822 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15823 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15824 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15825 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15826 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15827 % U+00C6 LATIN CAPITAL LETTER AE; AE
15828 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15829 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla

15830 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15831 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15832 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15833 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15834 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15835 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15836 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15837 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15838 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15839 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15840 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15841 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15842 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15843 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15844 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15845 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15846 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15847 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15848 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15849 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15850 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15851 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15852 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15853 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15854 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15855 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15856 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15857 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15858 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15859 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15860 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15861 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15862 % U+00D7 MULTIPLICATION SIGN; multiply
15863 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15864 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15865 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15866 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15867 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15868 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15869 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15870 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15871 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15872 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15873 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15874 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15875 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15876 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15877 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15878 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15879 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15880 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15881 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15882 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15883 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15884 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15885 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15886 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2

15887 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15888 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15889 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15890 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15891 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15892 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15893 % U+00E6 LATIN SMALL LETTER AE; ae
15894 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15895 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15896 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15897 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15898 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15899 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15900 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15901 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15902 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15903 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15904 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15905 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15906 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15907 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15908 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15909 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15910 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15911 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15912 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15913 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15914 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15915 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15916 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15917 % U+00F0 LATIN SMALL LETTER ETH; eth
15918 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15919 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15920 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15921 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15922 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15923 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15924 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15925 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15926 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15927 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15928 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15929 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15930 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15931 % U+00F7 DIVISION SIGN; divide
15932 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15933 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15934 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15935 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15936 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15937 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15938 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15939 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15940 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15941 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15942 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15943 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute

```

15944 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15945 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15946 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15947 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15948 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15949 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
15950 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15951 \DeclareTextCommand{\SS}{PD1}{SS}%
15952 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15953 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15954 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15955 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15956 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15957 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15958 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15959 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15960 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15961 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15962 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15963 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15964 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15965 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15966 \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).

```

15967 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15968 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15969 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15970 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15971 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15972 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15973 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15974 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15975 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15976 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15977 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15978 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15979 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15980 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

15981 </pd1enc>

```

51.2 PU encoding

```

15982 (*puenc)
15983 \DeclareFontEncoding{PU}{}{}

```

51.2.1 NFSS2 accents

```

15984 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15985 \DeclareTextCommand{\`}{PU}[1]{\#1\83\000}% U+0300
15986 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15987 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
15988 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb

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15989 \DeclareTextCommand{\~}{PU}[1]{#1\83\002}% U+0302
15990 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15991 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15992 % U+0304 COMBINING MACRON; macroncmb
15993 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15994 % U+0306 COMBINING BREVE; brevecmb
15995 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15996 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15997 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15998 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15999 % U+0308 COMBINING DIAERESIS; dieresiscmb
16000 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
16001 % U+030A COMBINING RING ABOVE; ringcmb
16002 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
16003 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
16004 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
16005 % U+030C COMBINING CARON; caroncmb
16006 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
16007 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravescmb
16008 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
16009 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
16010 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
16011 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
16012 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
16013 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
16014 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
16015 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
laut (tipa)
16016 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
16017 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
16018 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
16019 % U+0327 COMBINING CEDILLA; cedillacmb
16020 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
16021 % U+0328 COMBINING OGONEK; ogonekcmb
16022 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
16023 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
16024 % \textsubcircum (tipa)
16025 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
16026 % U+032E COMBINING BREVE BELOW; brevebelowcmb
16027 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
16028 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
16029 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
16030 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16031 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
16032 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
blecmb
16033 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
16034 % U+20DD COMBINING ENCLOSING CIRCLE
16035 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

16036 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
16037 \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.
16038 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
16039 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
16040 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%

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16041 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
16042 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
16043 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
16044 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
16045 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
16046 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
16047 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
16048 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
16049 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
16050 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
16051 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
16052 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\ \83\021\}}% U+0311
16053 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
16054 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
16055 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcirc-
low}%
16056 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
16057 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%
16058 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
16059 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
16060 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
16061 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
16062 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
16063 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16064 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16065 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
16066 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
16067 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
16068 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
16069 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
16070 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
16071 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
16072 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
16073 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
16074 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
16075 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
16076 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
16077 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
16078 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
16079 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
16080 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
16081 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
16082 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcirc-
low}%
16083 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
16084 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
16085 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
16086 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
16087 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
16088 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
16089 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
16090 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16091 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)
16092 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16093 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16094 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16095 \DeclareTextCommand{\capitalacute}{PU}[1]{\^{#1}}%

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16096 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16097 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16098 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
16099 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16100 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16101 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16102 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16103 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16104 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16105 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16106 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

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51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

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16107 % U+0009 (CHARACTER TABULATION)
16108 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16109 % U+000A (LINE FEED)
16110 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16111 % U+000D (CARRIAGE RETURN)
16112 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
16113 % U+0022 QUOTATION MARK; quotedbl
16114 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16115 % U+0023 NUMBER SIGN; numbersign
16116 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16117 % U+0024 DOLLAR SIGN; dollar
16118 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16119 %* \textdollar -> \mathdollar
16120 %* \textdollar -> \EyesDollar (marvosym)
16121 % U+0025 PERCENT SIGN; percent
16122 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16123 % U+0026 AMPERSAND; ampersand
16124 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16125 %* \textampersand -> \binampersand (stmaryrd)
16126 %* \textampersand -> \with (cmll)
16127 % U+0027 APOSTROPHE; quotesingle
16128 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16129 % U+0028 LEFT PARENTHESIS; parenleft
16130 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16131 % U+0029 RIGHT PARENTHESIS; parenright
16132 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16133 % U+002A ASTERISK; asterisk; (?)
16134 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16135 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
16136 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16137 % U+002C COMMA; comma; \MVComma (marvosym)
16138 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16139 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16140 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16141 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16142 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16143 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16144 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16145 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16146 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16147 % U+0031 DIGIT ONE; one; \MVOne (marvosym)

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16148 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
 16149 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
 16150 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
 16151 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
 16152 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
 16153 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
 16154 \DeclareTextCommand{\textMVFfour}{PU}{\80\064}%* U+0034
 16155 % U+0035 DIGIT FIVE; five; \MVFfive (marvosym)
 16156 \DeclareTextCommand{\textMVFfive}{PU}{\80\065}%* U+0035
 16157 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
 16158 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
 16159 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
 16160 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
 16161 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
 16162 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
 16163 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
 16164 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 16165 % U+003C LESS-THAN SIGN; less
 16166 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 16167 % U+003E GREATER-THAN SIGN; greater
 16168 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 16169 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
 16170 \DeclareTextCommand{\textMVAt}{PU}{\80\100}%* U+0040
 \80\101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \80\132: U+005A LATIN CAPITAL LETTER Z; Z
 \80\133: U+005B LEFT SQUARE BRACKET; bracketleft
 16171 % U+005C REVERSE SOLIDUS; backslash
 16172 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 16173 % U+005E CIRCUMFLEX ACCENT; asciicircum
 16174 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 16175 % U+005F LOW LINE; underscore
 16176 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 16177 %* \textunderscore -> \mathunderscore (LaTeX)
 16178 % U+0060 GRAVE ACCENT; grave
 16179 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
 \80\141: U+0061 LATIN SMALL LETTER A; a
 ...
 \80\150: U+0068 LATIN SMALL LETTER H; h
 16180 % U+0069 LATIN SMALL LETTER I; i
 16181 \DeclareTextCompositeCommand{.i}{PU}{i}% \80\151 U+0069
 16182 \DeclareTextCompositeCommand{.j}{PU}{j}% \80\151 U+0069
 \80\152: U+006A LATIN SMALL LETTER J; j
 ...
 \80\172: U+007A LATIN SMALL LETTER Z; z
 16183 % U+007B LEFT CURLY BRACKET; braceleft
 16184 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B

16185 % U+007C VERTICAL LINE; *bar, verticalbar
 16186 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 16187 %* \textbar -> \textverline (tipa)
 16188 % U+007D RIGHT CURLY BRACKET; braceright
 16189 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 16190 % U+007E TILDE; asciitilde
 16191 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 16192 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 16193 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 16194 % U+00A2 CENT SIGN; cent
 16195 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 16196 % U+00A3 POUND SIGN; sterling
 16197 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 16198 %* \textsterling -> \mathsterling (LaTeX)
 16199 %* \textsterling -> \pounds (LaTeX)
 16200 % U+00A4 CURRENCY SIGN; currency
 16201 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 16202 % U+00A5 YEN SIGN; yen
 16203 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 16204 % U+00A6 BROKEN BAR; brokenbar
 16205 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 16206 %* \textbrokenbar -> \brokenvert (wasysym)
 16207 % U+00A7 SECTION SIGN; section
 16208 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 16209 %* \textsection -> \mathsection (LaTeX)
 16210 %* \textsection -> \S (LaTeX)
 16211 % U+00A8 DIAERESIS; dieresis
 16212 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 16213 % U+00A9 COPYRIGHT SIGN; copyright
 16214 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
 16215 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 16216 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 16217 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 16218 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 16219 % U+00AC NOT SIGN; logicalnot
 16220 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 16221 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 16222 % U+00AE REGISTERED SIGN; registered
 16223 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 16224 % U+00AF MACRON; *macron, overscore
 16225 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 16226 % U+00B0 DEGREE SIGN; degree
 16227 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 16228 % U+00B1 PLUS-MINUS SIGN; plusminus
 16229 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 16230 % U+00B2 SUPERSCRIPT TWO; twosuperior
 16231 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
 16232 % U+00B3 SUPERSCRIPT THREE; threesuperior
 16233 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
 16234 % U+00B4 ACUTE ACCENT; acute
 16235 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4

16236 \DeclareTextCommand{\textasciicute}{PU}{\80\264}% U+00B4
16237 % U+00B5 MICRO SIGN; mu, mul
16238 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
16239 % U+00B6 PILCROW SIGN; paragraph
16240 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
16241 %* \textparagraph -> \mathparagraph (LaTeX)
16242 % U+00B7 MIDDLE DOT; middot, *periodcentered
16243 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
16244 %* \textperiodcentered -> \MultiplicationDot (marvosym)
16245 %* \textperiodcentered -> \Squaredot (marvosym)
16246 % U+00B8 CEDILLA; cedilla
16247 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
16248 % U+00B9 SUPERSCRIPT ONE; onesuperior
16249 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
16250 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
16251 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
16252 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
16253 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
16254 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
16255 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
16256 % U+00BD VULGAR FRACTION ONE HALF; onehalf
16257 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
16258 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
16259 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
16260 % U+00BF INVERTED QUESTION MARK; questiondown
16261 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
16262 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
16263 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
16264 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
16265 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
16266 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
16267 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
16268 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
16269 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
16270 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
16271 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
16272 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
16273 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
16274 % U+00C6 LATIN CAPITAL LETTER AE; AE
16275 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
16276 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
16277 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
16278 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
16279 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
16280 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
16281 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
16282 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
16283 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
16284 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
16285 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
16286 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
16287 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
16288 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
16289 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
16290 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
16291 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE

16292 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16293 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
16294 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16295 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16296 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16297 \DeclareTextCompositeCommand{~}{PU}{N}{\80\321}% U+00D1
16298 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16299 \DeclareTextCompositeCommand{`}{PU}{O}{\80\322}% U+00D2
16300 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16301 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}% U+00D3
16302 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
16303 \DeclareTextCompositeCommand{^}{PU}{O}{\80\324}% U+00D4
16304 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16305 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}% U+00D5
16306 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16307 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
16308 % U+00D7 MULTIPLICATION SIGN; multiply
16309 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16310 %* \textmultiply -> \vartimes (stmaryrd)
16311 %* \textmultiply -> \MVMultiplication (marvosym)
16312 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16313 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16314 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16315 \DeclareTextCompositeCommand{`}{PU}{U}{\80\331}% U+00D9
16316 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16317 \DeclareTextCompositeCommand{'}{PU}{U}{\80\332}% U+00DA
16318 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16319 \DeclareTextCompositeCommand{^}{PU}{U}{\80\333}% U+00DB
16320 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16321 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
16322 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16323 \DeclareTextCompositeCommand{'}{PU}{Y}{\80\335}% U+00DD
16324 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16325 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16326 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16327 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16328 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16329 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16330 \DeclareTextCompositeCommand{`}{PU}{a}{\80\340}% U+00E0
16331 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16332 \DeclareTextCompositeCommand{'}{PU}{a}{\80\341}% U+00E1
16333 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16334 \DeclareTextCompositeCommand{^}{PU}{a}{\80\342}% U+00E2
16335 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16336 \DeclareTextCompositeCommand{~}{PU}{a}{\80\343}% U+00E3
16337 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16338 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
16339 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16340 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16341 % U+00E6 LATIN SMALL LETTER AE; ae
16342 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16343 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16344 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16345 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16346 \DeclareTextCompositeCommand{`}{PU}{e}{\80\350}% U+00E8
16347 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16348 \DeclareTextCompositeCommand{'}{PU}{e}{\80\351}% U+00E9

16349 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16350 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
16351 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16352 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16353 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16354 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16355 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16356 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16357 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16358 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16359 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16360 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16361 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16362 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16363 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16364 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16365 % U+00F0 LATIN SMALL LETTER ETH; eth
16366 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16367 %* \dh -> \eth (wsuipa, phonetic)
16368 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16369 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
16370 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
16371 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
16372 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
16373 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
16374 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
16375 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
16376 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
16377 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
16378 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
16379 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
16380 % U+00F7 DIVISION SIGN; divide
16381 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
16382 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
16383 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
16384 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
16385 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
16386 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
16387 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
16388 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
16389 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
16390 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
16391 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
16392 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
16393 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
16394 % U+00FE LATIN SMALL LETTER THORN; thorn;
16395 % \th, \thorn (wasysym), \textthorn (tipa)
16396 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
16397 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
16398 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
16399 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

51.2.4 Latin Extended-A: U+0080 to U+017F

16400 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
16401 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
16402 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron

16403 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16404 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16405 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16406 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16407 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16408 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16409 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16410 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
16411 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16412 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16413 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
16414 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16415 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16416 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16417 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16418 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16419 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16420 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16421 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16422 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16423 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16424 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16425 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16426 % U+010D LATIN SMALL LETTER C WITH CARON; caron
16427 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16428 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16429 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16430 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16431 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16432 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16433 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16434 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16435 % \textcrd (tipa)
16436 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16437 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16438 %* \textcrd -> \crossd (wsuipa)
16439 % An alternate glyph with the stroke through the bowl:
16440 %* \textcrd -> \textbard (tipa)
16441 %* \textcrd -> \bard (wsuipa)
16442 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16443 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16444 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16445 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16446 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16447 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16448 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16449 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16450 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16451 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16452 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16453 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16454 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16455 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16456 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16457 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16458 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron

16459 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16460 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16461 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16462 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16463 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16464 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16465 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16466 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16467 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16468 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16469 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16470 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
16471 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16472 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16473 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16474 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
16475 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16476 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16477 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16478 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16479 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16480 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16481 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16482 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16483 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16484 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16485 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16486 %* \texthbar -> \textcrh (tipa)
16487 %* \texthbar -> \crossh (wsuipa)
16488 %* \texthbar -> \planck (phonetic)
16489 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16490 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16491 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16492 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16493 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
16494 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16495 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16496 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16497 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16498 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
16499 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16500 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16501 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16502 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16503 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
16504 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16505 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16506 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16507 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16508 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16509 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16510 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16511 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16512 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16513 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ

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16514 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16515 % U+0133 LATIN SMALL LIGATURE IJ; ij
16516 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16517 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16518 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16519 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16520 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16521 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135
16522 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16523 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16524 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16525 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has chosen `\textkra`.

```

16526 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16527 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16528 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16529 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16530 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16531 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16532 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
16533 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16534 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16535 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16536 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16537 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16538 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16539 \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`.

```

16540 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent
16541 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
16542 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
16543 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
16544 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
16545 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
16546 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
16547 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
16548 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
16549 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
16550 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
16551 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
16552 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent
16553 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
16554 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
16555 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
16556 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
16557 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
16558 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
16559 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148

```

16560 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
 trophe, quoterightn
 16561 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16562 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16563 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16564 % U+014B LATIN SMALL LETTER ENG; eng
 16565 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16566 %* \ng -> \eng (wsuipa)
 16567 %* \ng -> \engma (phonetic)
 16568 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16569 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16570 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16571 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16572 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16573 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16574 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16575 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16576 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odbla-
 cute, Ohungarumlaut
 16577 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16578 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-
 cute, ohungarumlaut
 16579 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16580 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16581 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 16582 % U+0153 LATIN SMALL LIGATURE OE; oe
 16583 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 16584 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 16585 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16586 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16587 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16588 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
 cent
 16589 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16590 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16591 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16592 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16593 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16594 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16595 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16596 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16597 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16598 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16599 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 16600 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 16601 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 16602 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 16603 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 16604 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 16605 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 16606 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 16607 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 16608 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 16609 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 16610 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 16611 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16612 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-

cent

16613 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16614 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16615 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16616 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16617 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16618 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16619 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16620 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16621 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16622 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16623 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16624 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16625 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16626 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16627 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16628 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16629 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16630 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16631 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
16632 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16633 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
16634 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
16635 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
16636 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
16637 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
16638 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
16639 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
16640 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
cute, Uhungarumlaut
16641 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
16642 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
cute, uhungarumlaut
16643 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
16644 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
16645 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
16646 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
16647 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
16648 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
16649 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
16650 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
16651 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
16652 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
16653 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
16654 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
16655 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
16656 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
16657 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
16658 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
16659 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
16660 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
16661 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
16662 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
16663 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
16664 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
16665 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
16666 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron

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16667 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
16668 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
16669 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
16670 % U+017F LATIN SMALL LETTER LONG S; longs, slong
16671 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16672 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
16673 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
16674 %* \textcrb -> \crossb (wsuipa)
16675 % An alternate glyph with the stroke through the bowl:
16676 %* \textcrb -> \textbarb (tipa)
16677 %* \textcrb -> \barb (wsuipa)
16678 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (pho-
      netic)
16679 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
16680 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
16681 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
16682 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-
      netic)
16683 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
16684 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
16685 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
16686 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16687 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16688 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16689 %* \textflorin -> \Florin (marvosym)
16690 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16691 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16692 %* \texthvlig -> \hv (wsuipa)
16693 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (pho-
      netic)
16694 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
16695 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16696 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16697 %* \texthtk -> \hausak (phonetic)
16698 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16699 % \textbarl (tipa), \barl (wsuipa)
16700 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16701 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16702 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16703 % \textcrlambda (tipa)
16704 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
16705 %* \textcrlambda -> \crossnilambda (wsuipa)
16706 %* \textcrlambda -> \barlambda (phonetic)
16707 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
16708 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
16709 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
      long;
16710 % \textnrleg (tipx)
16711 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16712 %* \textPUnrleg -> \textnrleg (tipx)
16713 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16714 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16715 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16716 % \textlhookt (tipa)
16717 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB

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16718 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16719 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16720 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16721 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16722 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16723 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16724 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16725 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16726 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16727 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16728 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16729 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16730 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16731 % \textpipe (tipa)
16732 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16733 %* \textpipe -> \textpipevar (tipx)
16734 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16735 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
16736 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16737 %* \textdoublepipe -> \textdoublepipevar (tipx)
16738 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
BLE BAR;
16739 % clickalveolar; \textdoublebarpipe (tipa)
16740 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16741 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16742 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16743 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16744 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
16745 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16746 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16747 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16748 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
16749 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16750 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16751 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16752 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16753 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
16754 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16755 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16756 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16757 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
16758 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16759 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16760 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16761 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16762 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16763 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16764 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16765 %* \textgslash -> \textcrg (tipa)
16766 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16767 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16768 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
16769 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16770 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16771 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16772 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron

16773 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16774 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16775 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16776 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16777 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16778 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16779 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16780 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16781 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16782 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16783 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16784 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16785 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16786 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16787 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16788 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16789 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16790 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16791 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16792 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16793 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16794 % *Oslashacute, Ostrokeacut
16795 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16796 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16797 % *oslashacute, ostrokeacut
16798 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16799 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16800 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16801 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16802 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16803 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16804 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16805 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16806 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16807 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16808 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16809 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
16810 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16811 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16812 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16813 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16814 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16815 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16816 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
16817 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16818 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16819 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16820 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16821 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16822 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16823 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16824 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16825 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-

edbreve
 16826 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
 16827 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
 breve
 16828 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
 16829 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 16830 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 16831 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 16832 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 16833 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 16834 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 16835 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 16836 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 16837 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
 edbreve
 16838 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
 16839 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
 breve
 16840 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 16841 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16842 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16843 % U+021F LATIN SMALL LETTER H WITH CARON
 16844 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16845 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16846 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16847 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16848 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16849 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16850 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16851 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16852 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16853 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16854 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16855 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16856 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16857 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16858 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16859 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16860 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16861 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16862 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16863 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16864 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16865 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16866 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16867 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16868 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16869 % U+0237 LATIN SMALL LETTER DOTLESS J
 16870 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16871 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16872 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16873 %* \textPUdblig -> \textdblig (tipx)
 16874 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16875 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16876 %* \textPUqplig -> \textqplig (tipx)
 16877 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16878 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C

16879 %* \textslashc -> \textcentoldstyle (textcomp)
 16880 % With bar instead of stroke:
 16881 %* \textslashc -> \textbarc (tipa)

51.2.6 IPA Extensions: U+0250 to U+02AF

16882 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16883 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16884 %* \textturna -> \inva (wasysym)
 16885 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16886 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16887 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16888 %* \textscripta -> \vara (phonetic)
 16889 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16890 % \textturnscripta (tipa)
 16891 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16892 %* \textturnscripta -> \invscripta (wsuipa)
 16893 %* \textturnscripta -> \rotvara (phonetic)
 16894 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16895 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16896 %* \texthtb -> \hookb (wsuipa)
 16897 %* \texthtb -> \hausab (phonetic)
 16898 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16899 % \textopeno (tipa), \openo (wasysym)
 16900 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16901 %* \textopeno -> \varopeno (phonetic)
 16902 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16903 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16904 %* \textctc -> \curlyc (wsuipa)
 16905 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16906 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16907 %* \textrtaild -> \taild (wsuipa)
 16908 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16909 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16910 %* \texthtd -> \hookd (wsuipa)
 16911 %* \texthtd -> \hausad (phonetic)
 16912 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16913 % \textreve (tipa), \reve (wsuipa)
 16914 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16915 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16916 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16917 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16918 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16919 % \textrhookschwa (tipa)
 16920 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A
 16921 %* \textrhookschwa -> \er (wsuipa)
 16922 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 % SILON; eopen;
 16923 % \niepsilon (wsuipa)
 16924 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16925 %* \textniepsilon -> \epsi (phonetic)
 16926 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16927 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16928 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
 16929 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 % reversedhook;
 16930 % \textrhookrevepsilon (tipa)
 16931 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D

16932 %* \textrhookreversesilon -> \hookreversesilon (wsuipa)
 16933 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenreversesdclosed;
 16934 % \textclosereversesilon (tipa)
 16935 \DeclareTextCommand{\textclosereversesilon}{PU}{\82\136}% U+025E
 16936 %* \textclosereversesilon -> \closedreversesilon (wsuipa)
 16937 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdotlessstroke;
 16938 % \textbardotlessj (tipa)
 16939 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16940 %* \textbardotlessj -> \barj (phonetic)
 16941 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16942 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16943 %* \texthtg -> \hookg (wsuipa)
 16944 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16945 % \textscriptg (tipa), \scriptg (wsuipa)
 16946 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16947 %* \textscriptg -> \varg (phonetic)
 16948 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16949 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
 16950 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
 16951 % \ipagamma (wsuipa), \vod (phonetic)
 16952 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
 16953 %* \textipagamma -> \vod (pnonetic)
 16954 % U+0264 LATIN LETTER RAMS HORN; ramshorn;
 16955 % \babygamma (wsuipa)
 16956 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
 16957 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16958 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16959 %* \textturnh -> \invh (wsuipa)
 16960 %* \textturnh -> \udesc (phonetic)
 16961 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16962 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16963 %* \texthth -> \hookh (wsuipa)
 16964 %* \texthth -> \voicedh (phonetic)
 16965 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \texththeng (tipa)
 16966 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16967 %* \texththeng -> \hookheng (wsuipa)
 16968 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16969 % \textbari (tipa), \bari (wsuipa)
 16970 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
 16971 %* \textbari -> \ibar (phonetic)
 16972 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
 16973 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
 16974 %* \textniiota -> \vari (phonetic)
 16975 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
 16976 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
 16977 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 16978 % \textltilde (tipa)
 16979 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 16980 %* \textltilde -> \tildel (wsuipa)
 16981 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 16982 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 16983 %* \textbeltl -> \latfrc (wsuipa)
 16984 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 16985 % \lhookretroflex; \textrtaill (tipa)

16986 \DeclareTextCommand{\textrtail}{PU}{\82\155}% U+026D
16987 %* \textrtail -> \tail (wsuipa)
16988 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16989 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16990 %* \textlyoghlig -> \lz (wsuipa)
16991 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16992 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16993 %* \textturnm -> \invm (wsuipa)
16994 %* \textturnm -> \rotrm (phonetic)
16995 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16996 % \textturnmrleg (tipa)
16997 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16998 %* \textturnmrleg -> \legm (wsuipa)
16999 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
17000 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
17001 %* \textltailm -> \labdentalnas (wsuipa)
17002 %* \textltailm -> \emgma (phonetic)
17003 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
17004 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
17005 %* \textltailn -> \nj (wsuipa)
17006 %* \textltailn -> \nya (phonetic)
17007 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
nhookretroflex; \textrtailn (tipa)
17008 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
17009 %* \textrtailn -> \tailn (wsuipa)
17010 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
17011 \DeclareTextCommand{\textscn}{PU}{\82\164}% U+0274
17012 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
17013 % LATIN CAPITAL LETTER BARRED O; obarred;
17014 % \textbaro (tipa), \baro (wsuipa)
17015 % But \baro from stmaryrd is different!
17016 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
17017 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscœlig (tipa)
17018 \DeclareTextCommand{\textscœlig}{PU}{\82\166}% U+0276
17019 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatincloded;
17020 % \textcloseomega (tipa)
17021 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
17022 %* \textcloseomega -> \closedniomega (wsuipa)
17023 %* \textcloseomega -> \varomega (phonetic)
17024 % U+0278 LATIN SMALL LETTER PHI; philatin; \niph (wsuipa)
17025 \DeclareTextCommand{\textniph}{PU}{\82\170}% U+0278
17026 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
17027 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
17028 %* \textturnr -> \invr (wsuipa)
17029 %* \textturnr -> \rotr (phonetic)
17030 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
17031 % rlonglegturned; \textturnlongleg (tipa)
17032 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
17033 %* \textturnlongleg -> \invleg (wsuipa)
17034 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhothturned;
17035 % \textturnrrtail (tipa)
17036 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
17037 %* \textturnrrtail -> \tailinvr (wsuipa)
17038 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-
glegr (tipa)

17040 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C
17041 %* \textlonglegr -> \legr (wsuipa)
17042 % U+027D LATIN SMALL LETTER R WITH TAIL; rho; \textrtailr (tipa)
17043 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
17044 %* \textrtailr -> \tailr (wsuipa)
17045 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
17046 % \textfishhookr (tipa)
17047 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
17048 %* \textfishhookr -> \flapr (wsuipa)
17049 %* \textfishhookr -> \flap (phonetic)
17050 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfish-
hookreversed;
17051 % \textlhtlongi (tipa)
17052 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17053 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17054 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17055 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17056 % \textinvscr (tipa), \invscr (wsuipa)
17057 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
17058 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \textrtails (tipa)
17059 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
17060 %* \textrtails -> \tails (wsuipa)
17061 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17062 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
17063 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17064 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17065 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17066 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatre-
versed;
17067 % \textvibyi (tipa)
17068 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17069 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17070 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17071 %* \textctesh -> \curlyesh (wsuipa)
17072 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17073 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17074 %* \textturnt -> \clickt (wsuipa)
17075 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
hook;
17076 % \textrtailt (tipa)
17077 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
17078 %* \textrtailt -> \tailt (wsuipa)
17079 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17080 % \textbaru (tipa), \baru (wsuipa)
17081 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
17082 %* \textbaru -> \ubar (phonetic)
17083 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17084 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
17085 %* \textniupsilon -> \rotOmega (phonetic)
17086 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
TER SCRIPT V;
17087 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17088 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
17089 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17090 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
17091 %* \textturnv -> \invv (wsuipa)
17092 %* \textturnv -> \pwedge (phonetic)

17093 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
 17094 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
 17095 %* \textturnw -> \invw (wsuipa)
 17096 %* \textturnw -> \rotw (phonetic)
 17097 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
 17098 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
 17099 %* \textturny -> \invy (wsuipa)
 17100 %* \textturny -> \roty (phonetic)
 17101 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
 17102 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
 17103 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
 17104 % \textrtailz (tipa)
 17105 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
 17106 %* \textrtailz -> \tailz (wsuipa)
 17107 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
 17108 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
 17109 %* \textctz -> \curlyz (wsuipa)
 17110 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
 17111 % \textyogh (tipa), \yogh (wsuipa)
 17112 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
 17113 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
 17114 % ezhcurl; \textctyogh (tipa)
 17115 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
 17116 %* \textctyogh -> \curlyyogh (wsuipa)
 17117 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
 17118 % \textglotstop (tipa), \glotstop (wsuipa)
 17119 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
 17120 %* \textglotstop -> \ejective (wsuipa)
 17121 %* \textglotstop -> \glottal (phonetic)
 17122 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
 17123 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
 17124 % \textrevglotstop (tipa), \revglotstop (wsuipa)
 17125 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
 17126 %* \textrevglotstop -> \reject (wsuipa)
 17127 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
 17128 % \textinvglotstop (tipa), \invglotstop (wsuipa)
 17129 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
 17130 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
 17131 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
 17132 %* \textstretchc -> \clickc (wsuipa)
 17133 %* \textstretchc -> \textstretchcvar (tipx)
 17134 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
 17135 % \textbullseye (tipa)
 17136 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
 17137 %* \textbullseye -> \clickb (wsuipa)
 17138 %* \textbullseye -> \textObullseye (tipx)
 17139 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
 17140 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
 17141 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
 17142 % \textcloseepsilon (tipa)
 17143 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
 17144 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
 17145 % \texthtscg (tipa)
 17146 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
 17147 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)

17148 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
 17149 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcros-
 tail; \textcdj (tipa)
 17150 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
 17151 %* \textctj -> \textctjvar (tipx)
 17152 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
 17153 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
 17154 %* \textturnk -> \textturnsck (tipx)
 17155 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
 17156 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
 17157 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
 17158 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 17159 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
 stroke;
 17160 % \textbarglotstop (tipa)
 17161 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 17162 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 17163 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
 versed;
 17164 % \textbarrevglotstop (tipa)
 17165 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 17166 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 17167 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 17168 %* \textdzlig -> \dz (wsupipa)
 17169 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
 lig (tipa)
 17170 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 17171 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 17172 % \textdctzlig (tipa)
 17173 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 17174 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 17175 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 17176 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
 17177 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
 17178 %* \texttshlig -> \tesh (wsuipa)
 17179 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 17180 % \texttctclig (tipa)
 17181 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 17182 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 17183 % \textlhtlongy (tipa)
 17184 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 17185 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 17186 % \textvibyy (tipa)
 17187 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

17188 % U+02BD MODIFIER LETTER REVERSED COMMA;
 17189 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 17190 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 17191 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 17192 % \textraiseglotstop (tipa)
 17193 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 17194 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 17195 % \textlptr (tipa)
 17196 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 17197 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 17198 % \textrptr (tipa)

17199 \DeclareTextCommand{\texttrptr}{PU}{\82\303}% U+02C3
 17200 % U+02C7 CARON; caron
 17201 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 17202 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 17203 % \textprimstress (tipa)
 17204 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 17205 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 17206 % \textsecstress (tipa)
 17207 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 17208 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 17209 % \textlengthmark (tipa)
 17210 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17211 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangu-
 larhalfmod;
 17212 % \texthalflength (tipa)
 17213 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17214 % U+02D8 BREVE; breve
 17215 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17216 % U+02D9 DOT ABOVE; dotaccent
 17217 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17218 % U+02DA RING ABOVE; ring
 17219 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17220 % U+02DB OGONEK; ogonek
 17221 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17222 % U+02DC SMALL TILDE; ilde, *tilde
 17223 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17224 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17225 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17226 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17227 % U+02F3 MODIFIER LETTER LOW RING
 17228 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17229 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17230 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17231 % U+02F7 MODIFIER LETTER LOW TILDE
 17232 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 17233 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17234 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17235 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17236 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

51.2.8 Combining Diacritical Marks: U+0300 to U+036F

17237 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravemod
 17238 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17239 % U+0311 COMBINING INVERTED BREVE; breveinvertedmod
 17240 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17241 % U+0323 COMBINING DOT BELOW; dotbelowmod, *dotbelowmod
 17242 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17243 % U+0331 COMBINING MACRON BELOW; macronbelowmod
 17244 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17245 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
 blemod
 17246 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

51.2.9 Greek and Coptic: U+0370 to U+03FF

17247 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17248 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17249 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek

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17250 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
17251 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
17252 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
17253 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
17254 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
17255 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
17256 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
17257 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
17258 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
17259 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicronos
17260 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
17261 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonos
17262 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
17263 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
17264 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
17265 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
17266 % iotadieresisos
17267 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
17268 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
17269 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
17270 % U+0392 GREEK CAPITAL LETTER BETA; Beta
17271 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
17272 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
17273 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
17274 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
17275 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
17276 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
17277 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
17278 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
17279 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
17280 % U+0397 GREEK CAPITAL LETTER ETA; Eta
17281 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
17282 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
17283 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
17284 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
17285 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
17286 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
17287 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
17288 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
17289 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
17290 % U+039C GREEK CAPITAL LETTER MU; Mu
17291 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
17292 % U+039D GREEK CAPITAL LETTER NU; Nu
17293 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17294 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17295 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17296 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17297 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17298 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17299 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17300 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17301 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17302 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17303 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17304 % U+03A4 GREEK CAPITAL LETTER TAU; Tau

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17305 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17306 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
17307 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17308 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17309 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17310 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17311 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17312 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
17313 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17314 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
17315 % \Omega (LaTeX)
17316 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17317 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17318 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17319 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\252}% U+03AA
17320 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
    silondieresis
17321 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17322 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17323 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17324 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
17325 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17326 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
17327 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
17328 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
17329 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
17330 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17331 % AND TONOS; upsilondieresis
17332 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
17333 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17334 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17335 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17336 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17337 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17338 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17339 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17340 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17341 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17342 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17343 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17344 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17345 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17346 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17347 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17348 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17349 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17350 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17351 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17352 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17353 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17354 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17355 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17356 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17357 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17358 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17359 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17360 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE

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17361 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17362 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17363 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17364 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17365 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17366 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17367 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17368 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17369 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17370 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17371 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17372 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17373 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17374 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17375 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17376 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17377 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17378 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17379 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17380 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17381 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17382 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17383 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17384 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17385 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
      silondieresis
17386 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17387 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17388 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17389 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17390 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17391 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17392 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17393 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17394 % U+03DA GREEK LETTER STIGMA; Stigmatagreek
17395 \DeclareTextCommand{\textStigmatagreek}{PU}{\83\332}% U+03DA
17396 % U+03DB GREEK SMALL LETTER STIGMA
17397 \DeclareTextCommand{\textstigmatagreek}{PU}{\83\333}% U+03DB
17398 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17399 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17400 % U+03DD GREEK SMALL LETTER DIGAMMA
17401 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17402 %* \textdigammagreek -> \digamma (AmS)
17403 % U+03DE GREEK LETTER KOPPA; Koppagreek
17404 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17405 % U+03DF GREEK SMALL LETTER KOPPA
17406 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17407 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17408 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17409 % U+03E1 GREEK SMALL LETTER SAMPI
17410 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17411 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17412 % \backepsilon (AmS)
17413 \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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17414 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17415 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
17416 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
17417 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17418 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
17419 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17420 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17421 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17422 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17423 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
17424 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17425 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17426 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17427 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17428 % Icyrrilic, *afii10055
17429 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17430 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
17431 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17432 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17433 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17434 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17435 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17436 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17437 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17438 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17439 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17440 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17441 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17442 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17443 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17444 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17445 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrilic, *afii10062
17446 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17447 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17448 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrrilic, *afii10145
17449 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17450 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17451 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17452 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17453 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17454 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17455 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17456 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17457 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17458 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17459 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17460 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17461 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17462 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrrilic, *afii10024
17463 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17464 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17465 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17466 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrrilic, *afii10026
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17467 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17468 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17469 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17470 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17471 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17472 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17473 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17474 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17475 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17476 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17477 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17478 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17479 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17480 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17481 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17482 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17483 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17484 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17485 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17486 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17487 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17488 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17489 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17490 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17491 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17492 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17493 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17494 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17495 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17496 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17497 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17498 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17499 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17500 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17501 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17502 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17503 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17504 % Hardsigncyrillic, *afii10044
17505 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17506 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17507 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17508 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17509 % Softsigncyrillic, *afii10046
17510 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17511 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
17512 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17513 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17514 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17515 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17516 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17517 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17518 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17519 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17520 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17521 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17522 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17523 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic

17524 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17525 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17526 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17527 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17528 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17529 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
17530 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17531 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17532 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17533 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17534 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17535 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17536 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17537 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17538 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17539 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17540 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17541 \DeclareTextCommand{\cysl}{PU}{\84\073}% U+043B
17542 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17543 \DeclareTextCommand{\cysm}{PU}{\84\074}% U+043C
17544 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17545 \DeclareTextCommand{\cysn}{PU}{\84\075}% U+043D
17546 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17547 \DeclareTextCommand{\cysr}{PU}{\84\076}% U+043E
17548 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17549 \DeclareTextCommand{\cysp}{PU}{\84\077}% U+043F
17550 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17551 \DeclareTextCommand{\cysr}{PU}{\84\100}% U+0440
17552 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17553 \DeclareTextCommand{\cysr}{PU}{\84\101}% U+0441
17554 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17555 \DeclareTextCommand{\cysrt}{PU}{\84\102}% U+0442
17556 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17557 \DeclareTextCommand{\cysru}{PU}{\84\103}% U+0443
17558 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17559 \DeclareTextCommand{\cysrf}{PU}{\84\104}% U+0444
17560 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17561 \DeclareTextCommand{\cysrh}{PU}{\84\105}% U+0445
17562 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17563 \DeclareTextCommand{\cysrc}{PU}{\84\106}% U+0446
17564 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17565 \DeclareTextCommand{\cysrch}{PU}{\84\107}% U+0447
17566 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17567 \DeclareTextCommand{\cysrsh}{PU}{\84\110}% U+0448
17568 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17569 \DeclareTextCommand{\cysrshch}{PU}{\84\111}% U+0449
17570 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17571 \DeclareTextCommand{\cysrhdsn}{PU}{\84\112}% U+044A
17572 %* \cysrhdsn -> \hardsign (tipa)
17573 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17574 \DeclareTextCommand{\cysrery}{PU}{\84\113}% U+044B
17575 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17576 \DeclareTextCommand{\cysrsftsn}{PU}{\84\114}% U+044C
17577 %* \cysrsftsn -> \softsign (tipa)
17578 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17579 \DeclareTextCommand{\cysrerev}{PU}{\84\115}% U+044D

17580 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17581 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
17582 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17583 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
17584 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17585 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
17586 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17587 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
17588 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
17589 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17590 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17591 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17592 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17593 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17594 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17595 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17596 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17597 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17598 % *afii10103, icyrillic
17599 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17600 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17601 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17602 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17603 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17604 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17605 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17606 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
17607 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17608 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17609 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17610 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17611 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17612 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17613 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17614 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17615 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17616 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17617 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17618 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17619 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17620 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17621 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17622 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17623 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17624 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17625 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17626 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17627 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17628 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17629 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17630 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17631 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17632 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
17633 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17634 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
17635 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467

17636 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
 otifiedcyrillic
 17637 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 17638 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
 otifiedcyrillic
 17639 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 17640 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 17641 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 17642 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 17643 \DeclareTextCommand{\cyrbysus}{PU}{\84\153}% U+046B
 17644 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 17645 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 17646 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
 cyrillic
 17647 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17648 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17649 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17650 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 17651 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 17652 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 17653 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 17654 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 17655 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17656 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 17657 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17658 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 17659 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17660 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 17661 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17662 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 17663 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17664 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17665 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17666 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17667 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17668 % GRAVE ACCENT; izhitsadblgravecyrillic
 17669 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17670 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17671 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17672 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17673 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17674 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 17675 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17676 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17677 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17678 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
 locyrillic
 17679 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17680 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
 cyrillic
 17681 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17682 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17683 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17684 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17685 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F

17686 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17687 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17688 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17689 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17690 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17691 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-
 cyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneu-
 matacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-
 acyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17692 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17693 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17694 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17695 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17696 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17697 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17698 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17699 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17700 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17701 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17702 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17703 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17704 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17705 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17706 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 17707 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17708 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17709 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17710 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17711 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17712 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17713 % Ghemiddlehookcyrillic
 17714 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17715 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17716 % ghemiddlehookcyrillic
 17717 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17718 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17719 % Zhedescendercyrillic
 17720 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17721 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17722 % zhedescendercyrillic
 17723 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17724 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17725 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17726 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17727 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-

cyrillic

17728 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499

17729 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499

17730 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic

17731 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A

17732 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic

17733 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B

17734 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;

17735 % Kavertikalstrokecyrillic

17736 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C

17737 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;

17738 % kavertikalstrokecyrillic

17739 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D

17740 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic

17741 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E

17742 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic

17743 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F

17744 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic

17745 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0

17746 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic

17747 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1

17748 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic

17749 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2

17750 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic

17751 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3

17752 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic

17753 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4

17754 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic

17755 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5

17756 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic

17757 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6

17758 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic

17759 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7

17760 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic

17761 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8

17762 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic

17763 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9

17764 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic

17765 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA

17766 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA

17767 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic

17768 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB

17769 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB

17770 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic

17771 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC

17772 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic

17773 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
17774 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
17775 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
17776 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
17777 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
17778 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
17779 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
17780 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
17781 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
17782 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
17783 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17784 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
17785 \DeclareTextCommand{\cyrh dsc}{PU}{\84\263}% U+04B3
17786 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
17787 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
17788 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
17789 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
17790 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
17791 % Chedescendercyrillic
17792 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
17793 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
17794 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
17795 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
17796 % Cheverticalstrokecyrillic
17797 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17798 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17799 % cheverticalstrokecyrillic
17800 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17801 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17802 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17803 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17804 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17805 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
17806 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17807 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
17808 \DeclareTextCommand{\cyrahbch}{PU}{\84\275}% U+04BD
17809 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
17810 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17811 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17812 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
17813 \DeclareTextCommand{\cyrahbchdsc}{PU}{\84\277}% U+04BF
17814 \DeclareTextCompositeCommand{\k}{PU}{\cyrahbch}{\84\277}% U+04BF
17815 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17816 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17817 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17818 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17819 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17820 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2

17821 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17822 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17823 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17824 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17825 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17826 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17827 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17828 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 17829 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17830 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17831 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17832 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17833 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17834 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17835 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17836 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17837 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17838 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17839 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17840 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17841 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 17842 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17843 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 17844 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17845 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyri-
 lic
 17846 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 17847 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17848 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 17849 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17850 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17851 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17852 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17853 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 17854 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17855 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 17856 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17857 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17858 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17859 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17860 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 17861 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17862 % Schwadiescyrillic
 17863 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17864 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17865 % schwadiescyrillic
 17866 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
 17867 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 17868 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 17869 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieres-
 cyrillic
 17870 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 17871 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieres-

cyrillic

17872 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE

17873 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic

17874 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF

17875 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic

17876 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0

17877 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic

17878 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1

17879 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic

17880 \DeclareTextCompositeCommand{=} {PU}{\CYRI}{\84\342}% U+04E2

17881 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic

17882 \DeclareTextCompositeCommand{=} {PU}{\cyrI}{\84\343}% U+04E3

17883 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic

17884 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4

17885 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic

17886 \DeclareTextCompositeCommand{"}{PU}{\cyrI}{\84\345}% U+04E5

17887 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic

17888 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6

17889 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic

17890 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7

17891 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic

17892 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8

17893 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic

17894 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9

17895 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;

17896 % Obarreddieresiscyrillic

17897 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA

17898 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;

17899 % obarreddieresiscyrillic

17900 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB

17901 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS

17902 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC

17903 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS

17904 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED

17905 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic

17906 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\356}% U+04EE

17907 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic

17908 \DeclareTextCompositeCommand{=} {PU}{\cyrU}{\84\357}% U+04EF

17909 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic

17910 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0

17911 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic

17912 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1

17913 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic

17914 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2

17915 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic

17916 \DeclareTextCompositeCommand{\H}{PU}{\cyrU}{\84\363}% U+04F3

17917 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic

17918 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4

17919 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic

cyrillic

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17920 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
17921 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17922 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17923 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17924 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17925 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
      siscyrillic
17926 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17927 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
      siscyrillic
17928 \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
17929 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17930 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17931 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17932 \DeclareTextCommand{\cyrhk}{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

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51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

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17933 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17934 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17935 % U+05D0 HEBREW LETTER ALEF
17936 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17937 % U+05D1 HEBREW LETTER BET
17938 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17939 % U+05D2 HEBREW LETTER GIMEL
17940 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17941 % U+05D3 HEBREW LETTER DALET
17942 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17943 % U+05D4 HEBREW LETTER HE
17944 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17945 % U+05D5 HEBREW LETTER VAV
17946 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17947 % U+05D6 HEBREW LETTER ZAYIN
17948 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17949 % U+05D7 HEBREW LETTER HET
17950 \DeclareTextCommand{\hebbet}{PU}{\85\327}% U+05D7
17951 % U+05D8 HEBREW LETTER TET
17952 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17953 % U+05D9 HEBREW LETTER YOD
17954 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17955 % U+05DA HEBREW LETTER FINAL KAF
17956 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17957 % U+05DB HEBREW LETTER KAF
17958 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
17959 % U+05DC HEBREW LETTER LAMED
17960 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17961 % U+05DD HEBREW LETTER FINAL MEM
17962 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD

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17963 % U+05DE HEBREW LETTER MEM
 17964 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 17965 % U+05DF HEBREW LETTER FINAL NUN
 17966 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17967 % U+05E0 HEBREW LETTER NUN
 17968 \DeclareTextCommand{\hebnnun}{PU}{\85\340}% U+05E0
 17969 % U+05E1 HEBREW LETTER SAMEKH
 17970 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17971 % U+05E2 HEBREW LETTER AYIN
 17972 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17973 % U+05E3 HEBREW LETTER FINAL PE
 17974 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17975 % U+05E4 HEBREW LETTER PE
 17976 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17977 % U+05E5 HEBREW LETTER FINAL TSADI
 17978 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17979 % U+05E6 HEBREW LETTER TSADI
 17980 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17981 % U+05E7 HEBREW LETTER QOF
 17982 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17983 % U+05E8 HEBREW LETTER RESH
 17984 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17985 % U+05E9 HEBREW LETTER SHIN
 17986 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17987 %* \hebshin -> \hebsin (he8)
 17988 % U+05EA HEBREW LETTER TAV
 17989 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17990 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17991 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17992 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17993 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17994 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17995 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17996 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17997 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17998 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsc (tipa)
 17999 \DeclareTextCommand{\textsc}{PU}{\9035\000}% U+1D00
 18000 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 18001 \DeclareTextCommand{\textscd}{PU}{\9035\005}% U+1D05
 18002 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 18003 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 18004 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 18005 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 18006 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textस्क (tipx)
 18007 \DeclareTextCommand{\textPUस्क}{PU}{\9035\013}% U+1D0B
 18008 %* \textPUस्क -> \textस्क (tipx)
 18009 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 18010 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 18011 %* \textPUscm -> \textscm (tipx)
 18012 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
 18013 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
 18014 %* \textPUscp -> \textscp (tipx)

18015 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 18016 \DeclareTextCommand{\textPurevscr}{PU}{\9035\031}% U+1D19
 18017 %* \textPurevscr -> \textrevscr (tipx)
 18018 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 18019 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 18020 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 18021 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 18022 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 18023 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 18024 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 18025 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 18026 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 18027 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 18028 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 18029 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 18030 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 18031 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 18032 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 18033 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 18034 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 18035 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 18036 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 18037 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 18038 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 18039 % \barsci (wsuipa)
 18040 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 18041 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 18042 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 18043 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 18044 % \barscu (wsuipa)
 18045 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

18046 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 18047 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 18048 %* \textPURhooka -> \textrhooka (tipx)
 18049 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 18050 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 18051 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 18052 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 18053 %* \textPURhooke -> \textrhooke (tipx)
 18054 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 18055 % \textrhookepsilon (tipx)
 18056 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 18057 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 18058 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 18059 % \textrhookopeno (tipx)
 18060 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 18061 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18062 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 18063 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 18064 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow

18065 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
18066 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
18067 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
18068 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
18069 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
18070 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
18071 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
18072 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
18073 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
18074 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
18075 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
18076 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
18077 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
18078 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
18079 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
18080 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
18081 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
18082 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
18083 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
18084 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
18085 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
18086 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
18087 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
18088 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
18089 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
18090 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
18091 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
18092 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
18093 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
18094 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
18095 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
18096 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
18097 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
18098 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
18099 % Emacrongrave
18100 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
18101 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
18102 % emacrongrave
18103 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
18104 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
18105 % Emacronacute
18106 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
18107 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
18108 % emacronacute
18109 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
18110 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
18111 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18112 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18113 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18114 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18115 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18116 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18117 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B

18118 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
18119 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
18120 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
18121 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
18122 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
18123 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20
18124 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
18125 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
18126 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
18127 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
18128 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
18129 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
18130 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
18131 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
18132 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
18133 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18134 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18135 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
18136 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18137 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
18138 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18139 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18140 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18141 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
18142 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
18143 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
18144 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
18145 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
18146 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
18147 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
18148 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
18149 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
18150 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
18151 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
18152 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
18153 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
18154 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
18155 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
18156 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
18157 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
18158 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
18159 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
18160 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
18161 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
18162 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
18163 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
18164 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
18165 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
18166 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
18167 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
18168 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
18169 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
18170 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
18171 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
18172 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow

18173 \DeclareTextCompositeCommand{\textsubcircum}{PU}{1}{\9036\075}% U+1E3D
 18174 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
 18175 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
 18176 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
 18177 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
 18178 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
 18179 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
 18180 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
 18181 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
 18182 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
 18183 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
 18184 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
 18185 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
 18186 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
 18187 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
 18188 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
 18189 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
 18190 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
 18191 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
 18192 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
 18193 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
 18194 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
 18195 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
 18196 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
 18197 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
 18198 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
 cumflexbelow
 18199 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
 18200 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
 cumflexbelow
 18201 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
 18202 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
 18203 % Omacrongrave
 18204 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
 18205 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
 18206 % omacrongrave
 18207 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
 18208 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
 18209 % Omacronacute
 18210 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
 18211 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 18212 % omacronacute
 18213 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 18214 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 18215 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 18216 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 18217 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 18218 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 18219 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 18220 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 18221 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 18222 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 18223 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 18224 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 18225 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 18226 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 18227 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A

18228 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 18229 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 18230 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 18231 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 18232 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 18233 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 18234 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 18235 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 18236 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 18237 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 18238 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 18239 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 18240 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 18241 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 18242 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 18243 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 18244 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 18245 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 18246 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 18247 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 18248 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 18249 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 18250 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 18251 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 18252 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 18253 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 18254 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 18255 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 18256 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 18257 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 18258 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 18259 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 18260 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow
 18261 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 18262 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 18263 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 18264 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 18265 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 18266 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 18267 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 18268 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 18269 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 18270 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 18271 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 18272 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 18273 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 18274 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 18275 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 18276 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 18277 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 18278 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave

18279 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
18280 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
18281 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
18282 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
18283 \DeclareTextCompositeCommand{\' }{PU}{W}{\9036\202}% U+1E82
18284 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
18285 \DeclareTextCompositeCommand{\' }{PU}{w}{\9036\203}% U+1E83
18286 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
18287 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
18288 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
18289 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
18290 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
18291 \DeclareTextCompositeCommand{\. }{PU}{W}{\9036\206}% U+1E86
18292 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
18293 \DeclareTextCompositeCommand{\. }{PU}{w}{\9036\207}% U+1E87
18294 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
18295 \DeclareTextCompositeCommand{\d }{PU}{W}{\9036\210}% U+1E88
18296 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
18297 \DeclareTextCompositeCommand{\d }{PU}{w}{\9036\211}% U+1E89
18298 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
18299 \DeclareTextCompositeCommand{\. }{PU}{X}{\9036\212}% U+1E8A
18300 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
18301 \DeclareTextCompositeCommand{\. }{PU}{x}{\9036\213}% U+1E8B
18302 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
18303 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
18304 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
18305 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
18306 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
18307 \DeclareTextCompositeCommand{\. }{PU}{Y}{\9036\216}% U+1E8E
18308 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
18309 \DeclareTextCompositeCommand{\. }{PU}{y}{\9036\217}% U+1E8F
18310 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
18311 \DeclareTextCompositeCommand{\^ }{PU}{Z}{\9036\220}% U+1E90
18312 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
18313 \DeclareTextCompositeCommand{\^ }{PU}{z}{\9036\221}% U+1E91
18314 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
18315 \DeclareTextCompositeCommand{\d }{PU}{Z}{\9036\222}% U+1E92
18316 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
18317 \DeclareTextCompositeCommand{\d }{PU}{z}{\9036\223}% U+1E93
18318 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18319 \DeclareTextCompositeCommand{\b }{PU}{Z}{\9036\224}% U+1E94
18320 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18321 \DeclareTextCompositeCommand{\b }{PU}{z}{\9036\225}% U+1E95
18322 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18323 \DeclareTextCompositeCommand{\b }{PU}{h}{\9036\226}% U+1E96
18324 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18325 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
18326 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18327 \DeclareTextCompositeCommand{\r }{PU}{w}{\9036\230}% U+1E98
18328 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
18329 \DeclareTextCompositeCommand{\r }{PU}{y}{\9036\231}% U+1E99
18330 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
18331 \DeclareTextCompositeCommand{\. }{PU}{\textlongs}{\9036\233}% U+1E9B
18332 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
18333 \DeclareTextCompositeCommand{\d }{PU}{A}{\9036\240}% U+1EA0
18334 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow

18335 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 18336 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 18337 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 18338 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 18339 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 18340 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 18341 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 18342 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 18343 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 18344 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 18345 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 18346 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 18347 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 18348 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 18349 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 18350 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18351 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 18352 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18353 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 18354 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18355 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18356 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18357 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 18358 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18359 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 18360 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18361 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18362 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18363 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18364 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18365 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18366 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18367 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18368 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 18369 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18370 % U+2013 EN DASH; endash
 18371 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18372 % U+2014 EM DASH; emdash
 18373 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18374 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18375 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18376 % * \textbardbl -> \textdoublevertline (tipa)
 18377 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18378 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18379 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18380 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18381 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18382 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18383 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18384 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18385 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18386 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18387 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18388 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18389 % U+2020 DAGGER; dagger

18390 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18391 %* \textdagger -> \dag (LaTeX)
 18392 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18393 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18394 %* \textdaggerdbl -> \ddagger (LaTeX)
 18395 %* \textdaggerdbl -> \ddag (LaTeX)
 18396 % U+2022 BULLET; bullet
 18397 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18398 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18399 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18400 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18401 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18402 %* \textellipsis -> \mathellipsis
 18403 % U+2030 PER MILLE SIGN; perthousand
 18404 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18405 % U+2031 PER TEN THOUSAND SIGN
 18406 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18407 % U+2032 PRIME; minute; \prime (MnSymbol)
 18408 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18409 % U+2033 DOUBLE PRIME; \second (mathabx)
 18410 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18411 % U+2034 TRIPLE PRIME; \third (mathabx)
 18412 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18413 % U+2035 REVERSED PRIME; \backprime (Ams)
 18414 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18415 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 18416 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 18417 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 18418 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 18419 % U+203B REFERENCE MARK; referencemark
 18420 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18421 % U+203D INTERROBANG
 18422 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18423 % U+2044 FRACTION SLASH; fraction
 18424 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18425 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18426 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18427 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18428 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18429 % U+2052 COMMERCIAL MINUS SIGN
 18430 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18431 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18432 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18433 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18434 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18435 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18436 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18437 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18438 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18439 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18440 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18441 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18442 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074

18443 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18444 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18445 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18446 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18447 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18448 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18449 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18450 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18451 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18452 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18453 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18454 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18455 % U+207B SUPERSCRIPT MINUS
 18456 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18457 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18458 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}%* U+207C
 18459 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18460 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18461 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18462 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18463 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18464 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18465 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18466 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 18467 % U+2081 SUBSCRIPT ONE; oneinferior
 18468 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18469 % U+2082 SUBSCRIPT TWO; twoinferior
 18470 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18471 % U+2083 SUBSCRIPT THREE; threeinferior
 18472 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18473 % U+2084 SUBSCRIPT FOUR; fourinferior
 18474 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18475 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18476 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18477 % U+2086 SUBSCRIPT SIX; sixinferior
 18478 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18479 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18480 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18481 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18482 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18483 % U+2089 SUBSCRIPT NINE; nineinferior
 18484 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18485 % U+208A SUBSCRIPT PLUS SIGN
 18486 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18487 % U+208B SUBSCRIPT MINUS
 18488 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18489 % U+208C SUBSCRIPT EQUALS SIGN
 18490 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18491 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18492 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18493 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18494 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18495 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18496 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18497 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18498 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18499 % U+2092 LATIN SUBSCRIPT SMALL LETTER O

18500 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18501 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18502 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18503 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18504 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18505 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18506 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18507 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18508 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18509 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18510 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18511 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18512 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18513 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18514 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18515 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18516 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18517 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18518 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18519 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18520 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18521 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18522 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18523 % U+20A4 LIRA SIGN; afi08941, *lira
 18524 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18525 % U+20A6 NAIRA SIGN
 18526 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18527 % U+20A7 PESETA SIGN; peseta
 18528 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18529 % U+20A9 WON SIGN; won
 18530 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18531 % U+20AB DONG SIGN; dong
 18532 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18533 % U+20AC EURO SIGN; *Euro, euro
 18534 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18535 %* \texteuro -> \EurDig (marvosym)
 18536 %* \texteuro -> \EURdig (marvosym)
 18537 %* \texteuro -> \EurHv (marvosym)
 18538 %* \texteuro -> \EURhv (marvosym)
 18539 %* \texteuro -> \EurCr (marvosym)
 18540 %* \texteuro -> \EURcr (marvosym)
 18541 %* \texteuro -> \EurTm (marvosym)
 18542 %* \texteuro -> \EURtm (marvosym)
 18543 %* \texteuro -> \Eur (marvosym)
 18544 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18545 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18546 %* \textDeleatur -> \Denarius (marvosym)
 18547 % U+20B1 PESO SIGN
 18548 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18549 % U+20B2 GUARANI SIGN
 18550 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18551 % U+2103 DEGREE CELSIUS; centigrade
 18552 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103

18553 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18554 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18555 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18556 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18557 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18558 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18559 % U+2116 NUMERO SIGN; *afii61352, numero
 18560 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18561 % U+2117 SOUND RECORDING COPYRIGHT
 18562 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18563 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18564 % weierstrass; \wp (LaTeX)
 18565 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18566 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18567 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18568 % U+211E PRESCRIPTION TAKE; prescription
 18569 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18570 % U+2120 SERVICE MARK
 18571 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18572 % U+2122 TRADE MARK SIGN; trademark
 18573 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18574 % U+2126 OHM SIGN; Ohm, Omega
 18575 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18576 % U+2127 INVERTED OHM SIGN
 18577 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18578 %* \textmho -> \agemO (wasysym)
 18579 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18580 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18581 % U+212B ANGSTROM SIGN; angstrom
 18582 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18583 % U+212E ESTIMATED SYMBOL; estimated
 18584 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18585 %* \textestimated -> \EstimatedSign (marvosym)
 18586 %* \textestimated -> \Ecommerce (marvosym)
 18587 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18588 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18589 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18590 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18591 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18592 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18593 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18594 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18595 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18596 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18597 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18598 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18599 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18600 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18601 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18602 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18603 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18604 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18605 % U+2150 VULGAR FRACTION ONE SEVENTH
 18606 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150

18607 % U+2151 VULGAR FRACTION ONE NINTH
 18608 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18609 % U+2152 VULGAR FRACTION ONE TENTH
 18610 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18611 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18612 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18613 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18614 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18615 % U+2155 VULGAR FRACTION ONE FIFTH
 18616 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18617 % U+2156 VULGAR FRACTION TWO FIFTHS
 18618 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18619 % U+2157 VULGAR FRACTION THREE FIFTHS
 18620 \DeclareTextCommand{\textthreelfths}{PU}{\9041\127}% U+2157
 18621 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18622 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18623 % U+2159 VULGAR FRACTION ONE SIXTH
 18624 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18625 % U+215A VULGAR FRACTION FIVE SIXTHS
 18626 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18627 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18628 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18629 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18630 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18631 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18632 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18633 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18634 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18635 % U+2184 LATIN SMALL LETTER REVERSED C
 18636 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18637 % U+2189 VULGAR FRACTION ZERO THIRDS
 18638 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18639 % U+2190 LEFTWARDS ARROW; arrowleft
 18640 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18641 % U+2191 UPWARDS ARROW; arrowup
 18642 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18643 % U+2192 RIGHTWARDS ARROW; arrowright
 18644 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18645 %* \textrightarrow -> \MVRightArrow (marvosym)
 18646 %* \textrightarrow -> \MVRightarrow (marvosym)
 18647 % U+2193 DOWNWARDS ARROW; arrowdown
 18648 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18649 %* \textdownarrow -> \MVArrowDown (marvosym)
 18650 %* \textdownarrow -> \Force (marvosym)
 18651 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18652 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18653 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18654 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18655 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18656 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18657 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18658 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18659 %* \textnearrow -> \textglobrise (tipa)
 18660 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18661 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198

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18662 %* \textsearrow -> \textglobfall (tipa)
18663 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18664 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18665 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
18666 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18667 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
18668 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18669 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18670 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18671 % \ntwoheadleftarrow (txfonts/pxfonts)
18672 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18673 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18674 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18675 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18676 % \twoheadrightarrow (AmS)
18677 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18678 % \ntwoheadrightarrow (txfonts/pxfonts)
18679 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18680 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
      Symbol)
18681 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18682 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18683 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18684 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18685 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18686 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18687 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18688 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18689 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18690 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18691 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18692 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18693 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18694 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18695 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18696 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
18697 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\256}%* U+21AE
18698 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18699 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18700 %* \textlightning -> \Lightning (marvosym)
18701 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18702 % \dls (mathabx)
18703 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18704 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18705 % \curvearrowleft (AmS)
18706 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18707 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18708 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18709 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
      barbup;
18710 % \leftharpoonup (LaTeX)
18711 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18712 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18713 % \leftharpoondown (LaTeX)
18714 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18715 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18716 % \upharpoonright (AmS)

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18717 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18718 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18719 % \upharpoonleft (AmS)
18720 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18721 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18722 % \rightharpoonup (LaTeX)
18723 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18724 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18725 % \rightharpoondown (LaTeX)
18726 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18727 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18728 % \downharpoonright (AmS)
18729 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18730 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18731 % \downharpoonleft (AmS)
18732 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18733 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18734 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18735 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18736 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
      rowupleftofdown;
18737 % \updownarrows (MnSymbol)
18738 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18739 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
      overright;
18740 % \leftrightharpoons (AmS)
18741 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\306}%* U+21C6
18742 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18743 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18744 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18745 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18746 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18747 \DeclareTextCommand{\textrightrightarrows}{PU}{\9041\311}%* U+21C9
18748 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18749 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18750 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18751 % \leftrightharpoons (AmS);
18752 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18753 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18754 % \rightleftharpoons (LaTeX, AmS)
18755 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18756 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
      blstroke;
18757 % \nLeftarrow (AmS)
18758 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18759 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightar-
      row (AmS)
18760 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18761 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
      blstroke;
18762 % \nRightarrow (AmS)
18763 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18764 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18765 % \Leftarrow (LaTeX)
18766 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18767 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)

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18768 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18769 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18770 % \Rrightarrow (LaTeX)
18771 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\322}%* U+21D2
18772 %* \textRrightarrow -> \Conclusion (marvosym)
18773 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
18774 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18775 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18776 % \Leftrightarrow (LaTeX)
18777 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18778 %* \textLeftrightarrow -> \Equivalence (marvosym)
18779 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18780 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18781 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18782 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18783 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18784 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18785 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18786 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18787 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18788 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18789 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18790 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18791 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18792 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18793 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18794 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18795 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18796 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18797 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18798 % \dashleftarrow (AmS)
18799 \DeclareTextCommand{\texdashleftarrow}{PU}{\9041\340}%* U+21E0
18800 %* \texdashleftarrow -> \dashedleftarrow (MnSymbol)
18801 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (MnSymbol)
18802 \DeclareTextCommand{\texdasheduparrow}{PU}{\9041\341}%* U+21E1
18803 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow (AmS)
18804 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\342}%* U+21E2
18805 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
18806 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow (MnSymbol)
18807 \DeclareTextCommand{\texdasheddownarrow}{PU}{\9041\343}%* U+21E3
18808 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18809 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18810 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18811 % \downuparrows (MnSymbol)
18812 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18813 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18814 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18815 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18816 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18817 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle (stmaryrd)
18818 \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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18819 % U+2200 FOR ALL; forall; \forall (LaTeX)
18820 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18821 % U+2201 COMPLEMENT; \complement (AmS)
18822 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18823 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18824 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18825 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18826 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18827 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18828 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18829 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18830 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18831 %* \textemptyset -> \varnothing (AmS)
18832 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18833 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18834 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18835 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18836 % U+2208 ELEMENT OF; element; \in (LaTeX)
18837 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18838 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18839 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18840 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18841 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18842 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18843 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18844 %* \textni -> \owns (mathabx)
18845 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18846 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18847 %* \textnotowner -> \notni (txfonts/pxfonts)
18848 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18849 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18850 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18851 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18852 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18853 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18854 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18855 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18856 % U+2212 MINUS SIGN; minus
18857 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18858 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18859 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18860 % U+2214 DOT PLUS; \dotplus (AmS)
18861 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18862 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18863 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18864 % \DividesNot (marvosym)
18865 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18866 % U+2216 SET MINUS; \setminus (LaTeX)
18867 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18868 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18869 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18870 % U+2218 RING OPERATOR; \circ (LaTeX)
18871 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18872 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18873 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18874 % U+221A SQUARE ROOT; radical

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18875 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18876 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18877 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18878 %* \textpropto -> \varprop (wasysym)
18879 % U+221E INFINITY; infinity; \infty (LaTeX)
18880 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18881 % U+2220 ANGLE; angle; \angle (LaTeX)
18882 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18883 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18884 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18885 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18886 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18887 %* \textsphericalangle -> \varangle (wasysym)
18888 %* \textsphericalangle -> \Anglesign (marvosym)
18889 %* \textsphericalangle -> \AngleSign (marvosym)
18890 % U+2223 DIVIDES; divides; \mid (LaTeX)
18891 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18892 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18893 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18894 %* \textnmid -> \notdivides (mathabx)
18895 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18896 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18897 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18898 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18899 %* \textnparallel -> nUpdownline (MnSymbol)
18900 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18901 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18902 % \owedge (stmaryrd)
18903 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18904 %* \textowedge -> \varowedge (stmaryrd)
18905 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18906 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18907 % \ovee (stmaryrd)
18908 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18909 %* \textovee -> \varovee (stmaryrd)
18910 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18911 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18912 % U+222A UNION; union; \cup (LaTeX)
18913 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18914 % U+222B INTEGRAL; integral; \int (LaTeX)
18915 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18916 %* \textint -> \varint (wasysym)
18917 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18918 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18919 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18920 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18921 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18922 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18923 %* \textoint -> \varoint (wasysym)
18924 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18925 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18926 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18927 % \ointclockwise (txfonts/pxfonts)
18928 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18929 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
      fonts/pxfonts)
18930 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233

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18931 % U+2234 THEREFORE; therefore; \therefore (AmS)
 18932 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
 18933 %* \texttherefore -> uptherefore (MnSymbol)
 18934 % U+2235 BECAUSE; because; \because (AmS)
 18935 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
 18936 %* \textbecause -> \downtherefore (MnSymbol)
 18937 % U+2236 RATIO; \vdotdot (MnSymbol)
 18938 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
 18939 % U+2237 PROPORTION; \squaredots (MnSymbol)
 18940 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
 18941 % U+2238 DOT MINUS; \dotminus (MnSymbol)
 18942 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
 18943 %* \textdotminus -> \textdotdiv (mathabx)
 18944 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
 18945 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
 18946 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
 18947 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
 18948 %* \textsim -> \AC (wasysym)
 18949 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
 18950 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
 18951 % \nbacksim (txfonts/pxfonts)
 18952 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
 18953 % U+2240 WREATH PRODUCT; \wr (LaTeX)
 18954 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
 18955 %* \textwr -> \wreath (MnSymbol)
 18956 % U+2241 NOT TILDE; \nsim (AmS)
 18957 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
 18958 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
 18959 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
 18960 % \neqsim (MnSymbol)
 18961 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
 18962 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
 18963 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
 18964 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
 18965 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
 18966 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
 18967 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
 18968 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
 18969 % \ncong (AmS)
 18970 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
 18971 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
 18972 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
 18973 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
 18974 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
 18975 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
 18976 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
 18977 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
 18978 % \napproxeq (txfonts/pxfonts)
 18979 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
 18980 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
 18981 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
 18982 %* \texttriplesim -> \VHF (wasysym)
 18983 % \ntriplesim (MnSymbol)
 18984 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
 18985 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
 18986 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C

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18987 % \nbackcong (MnSymbol)
18988 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18989 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18990 \DeclareTextCommand{\textasym}{PU}{\9042\115}%* U+224D
18991 % \nasym (txfonts/pxfonts)
18992 \DeclareTextCommand{\textnasym}{PU}{\9042\115\83\070}%* U+224D U+0338
18993 %* \textnasym -> \notasym (mathabx)
18994 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18995 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18996 % \nBumpeq (txfonts/pxfonts)
18997 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18998 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18999 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
19000 % \nbumpeq (txfonts/pxfonts)
19001 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
19002 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
19003 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
19004 % \ndoteq (MnSymbol)
19005 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
19006 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
19007 % \doteqdot (AmS)
19008 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
19009 %* \textdoteqdot -> \Doteq (MnSymbol)
19010 % \nDoteq (MnSymbol)
19011 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
19012 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
    qualorimage;
19013 % \fallingdotseq (AmS)
19014 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
19015 % \nfallingdotseq (MnSymbol)
19016 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
19017 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapprox-
    imatelyequal;
19018 % \risingdotseq (AmS)
19019 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
19020 % \nrisingdoteq (MnSymbol)
19021 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
19022 % U+2254 COLON EQUALS; \colonequals (colonequals)
19023 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
19024 % U+2255 EQUALS COLON; \equalscolon (colonequals)
19025 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
19026 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
19027 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
19028 % \neqcirc (MnSymbol)
19029 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
19030 % U+2257 RING EQUAL TO; \circeq (AmS)
19031 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
19032 % \ncirceq (MnSymbol)
19033 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
19034 % U+2259 ESTIMATES; \hateq (MnSymbol)
19035 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
19036 %* \texthateq -> \corresponds (mathabx)
19037 %* \texthateq -> \Corresponds (marvosym)
19038 % \nhateq (MnSymbol)
19039 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
19040 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
19041 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C

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19042 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
 19043 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
 19044 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
 19045 %* \textneq -> \nequal (MnSymbol)
 19046 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
 19047 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
 19048 %* \textequiv -> \Congruent (marvosym)
 19049 % U+2262 NOT IDENTICAL TO; notidentical; \notequiv (txfonts/pxfonts)
 19050 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
 19051 %* \textnequiv -> \NotCongruent (marvosym)
 19052 %* \textnequiv -> \notequiv (mathabx)
 19053 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
 19054 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
 19055 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
 19056 %* \textleq -> \LessOrEqual (marvosym)
 19057 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
 19058 % \ge (LaTeX), \geq (LaTeX)
 19059 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
 19060 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
 19061 %* \textgeq -> \LargerOrEqual (marvosym)
 19062 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
 19063 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
 19064 % \nleqq (txfonts/pxfonts)
 19065 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
 19066 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
 19067 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
 19068 % \ngeqq (txfonts/pxfonts)
 19069 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
 19070 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
 19071 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
 19072 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
 19073 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
 19074 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
 19075 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
 19076 % \nll (txfonts/pxfonts)
 19077 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
 19078 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
 19079 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
 19080 % \ngg (txfonts/pxfonts)
 19081 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
 19082 % U+226C BETWEEN; \between (AmS)
 19083 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
 19084 % U+226E NOT LESS-THAN; notless; \nless (AmS)
 19085 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
 19086 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
 19087 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
 19088 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
 19089 % \nleq (AmS)
 19090 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
 19091 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
 19092 % \ngeq (AmS)
 19092 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
 19093 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lesssim (AmS)
 19094 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272
 19095 %* \textlessim -> \apprle (wasysym)
 19096 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)

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19097 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
19098 %* \textgtrsim -> \apprge (wasysym)
19099 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-
      fonts/pxfonts)
19100 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
19101 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-
      fonts/pxfonts)
19102 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
19103 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
19104 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
19105 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
19106 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
19107 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
      fonts/pxfonts)
19108 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
19109 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
      fonts/pxfonts)
19110 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
19111 % U+227A PRECEDES; precedes; \prec (LaTeX)
19112 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
19113 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
19114 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
19115 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
19116 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
19117 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
19118 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
19119 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
19120 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
19121 % \nprecsim (txfonts/pxfonts)
19122 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
19123 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
19124 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
19125 % \nsuccsim (txfonts/pxfonts)
19126 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
19127 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
19128 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
19129 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
19130 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
19131 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
19132 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
19133 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
19134 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
19135 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
19136 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
19137 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
19138 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
19139 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
19140 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
19141 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
19142 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
19143 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
19144 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
19145 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
19146 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
19147 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
      neq (AmS)
19148 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A

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19149 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
      neq (AmS)
19150 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
19151 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
19152 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
19153 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
19154 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
19155 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
19156 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
19157 % \nsqsubset (txfonts/pxfonts)
19158 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
19159 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
19160 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
19161 % \nsqsupset (txfonts/pxfonts)
19162 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
19163 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseq (LaTeX)
19164 \DeclareTextCommand{\textsqsubseq}{PU}{\9042\221}%* U+2291
19165 % \nsqsubseq (txfonts/pxfonts)
19166 \DeclareTextCommand{\textnsqsubseq}{PU}{\9042\221\83\070}%* U+2291 U+0338
19167 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
19168 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
19169 % \nsqsupseteq (txfonts/pxfonts)
19170 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
19171 % U+2293 SQUARE CAP; \sqcap (LaTeX)
19172 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19173 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19174 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19175 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19176 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19177 %* \textoplus -> \varoplus (stmaryrd)
19178 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19179 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19180 %* \textominus -> \varominus (stmaryrd)
19181 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19182 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19183 %* \textotimes -> \varotimes (stmaryrd)
19184 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19185 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19186 %* \textoslash -> \varoslash (stmaryrd)
19187 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19188 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19189 %* \textodot -> \varodot (stmaryrd)
19190 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19191 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19192 %* \textcircledcirc -> \ocirc (mathabx)
19193 %* \textcircledcirc -> \varocircle (stmaryrd)
19194 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19195 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19196 %* \textcircledast -> \varoast (stmaryrd)
19197 %* \textcircledast -> \oasterisk (mathabx)
19198 % U+229D CIRCLED DASH; \circleddash (AmS)
19199 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19200 % U+229E SQUARED PLUS; \boxplus (AmS)
19201 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19202 % U+229F SQUARED MINUS; \boxminus (AmS)
19203 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19204 % U+22A0 SQUARED TIMES; \boxtimes (AmS)

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19205 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19206 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19207 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19208 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19209 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19210 %* \textvdash -> \rightvdash (MnSymbol)
19211 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
19212 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19213 %* \textdashv -> \leftvdash (MnSymbol)
19214 % \ndashv (mathabx)
19215 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19216 %* \textndashv -> \nleftvdash (MnSymbol)
19217 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
19218 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
19219 %* \texttop -> \downvdash (MnSymbol)
19220 % \ndownvdash (MnSymbol)
19221 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19222 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19223 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19224 %* \textbot -> \upvdash (MnSymbol)
19225 % \nupvdash (MnSymbol)
19226 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19227 %* \textnupvdash -> \nperp (MnSymbol)
19228 % U+22A8 TRUE; \vdash (AmS)
19229 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19230 %* \textvDash -> \models (LaTeX)
19231 %* \textvDash -> \rightmodels (MnSymbol)
19232 % U+22A9 FORCES; \Vdash (AmS)
19233 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19234 %* \textVdash -> \rightVdash (MnSymbol)
19235 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19236 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19237 % \nVvdash (mathabx)
19238 \DeclareTextCommand{\textnVvdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19239 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19240 % \VDash (mathabx)
19241 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19242 %* \textVDash -> \rightModels (MnSymbol)
19243 % U+22AC DOES NOT PROVE; \nvdash (AmS)
19244 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
19245 %* \textnvdash -> \nrightvdash (MnSymbol)
19246 % U+22AD NOT TRUE; \nvDash (AmS)
19247 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19248 %* \textnvDash -> \nrightmodels (MnSymbol)
19249 %* \textnvDash -> \nmodels (MnSymbol)
19250 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
19251 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
19252 %* \textnVdash -> \nrightVdash (MnSymbol)
19253 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
    STILE; \nVDash (AmS)
19254 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19255 %* \textnVDash -> \nrightModels (MnSymbol)
19256 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19257 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19258 %* \textlhd -> \lessclosed (MnSymbol)
19259 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19260 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3

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19261 %* \texttrhd -> \gtrclosed (MnSymbol)
19262 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19263 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19264 %* \textunlhd -> \leqclosed (MnSymbol)
19265 %* \textunlhd -> \trianglelefteq (MnSymbol)
19266 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
    texsym, ...)
19267 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19268 %* \textunrhd -> \geqclosed (MnSymbol)
19269 %* \textunrhd -> \trianglerighteq (MnSymbol)
19270 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19271 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19272 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19273 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19274 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19275 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19276 % U+22BB XOR; \veebar (AmS)
19277 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19278 % U+22BC NAND; \barwedge (mathabx)
19279 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19280 % U+22C6 STAR OPERATOR; \star (LaTeX)
19281 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19282 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19283 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19284 % U+22C8 BOWTIE; \bowtie (LaTeX)
19285 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19286 %* \textbowtie -> \Bowtie (wasysym)
19287 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19288 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19289 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19290 % \rtimes (AmS)
19291 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19292 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19293 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19294 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19295 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19296 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19297 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19298 % \nbacksimeq (txfonts/pxfonts)
19299 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19300 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19301 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19302 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19303 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19304 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19305 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19306 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19307 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19308 % \nSubset (txfonts/pxfonts)
19309 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19310 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19311 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19312 % \nSupset (txfonts/pxfonts)
19313 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19314 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19315 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19316 %* \textCap -> \doublecap (mathabx)

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19317 % U+22D3 DOUBLE UNION; \Cup (AmS)
19318 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19319 %* \textCup -> \doublecup (mathabx)
19320 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19321 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19322 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19323 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19324 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19325 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19326 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19327 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19328 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19329 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19330 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lesseqqualorgreater;
19331 % \lesseqgtr (AmS)
19332 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19333 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
19334 % \gtreqless (AmS)
19335 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
19336 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19337 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19338 % \ncurlyeqprec (mathabx)
19339 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19340 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
19341 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19342 % \ncurlyeqsucc (mathabx)
19343 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19344 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19345 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19346 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19347 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19348 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
    fonts/pxfonts)
19349 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19350 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
19351 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19352 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19353 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19354 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19355 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
19356 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19357 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19358 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19359 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19360 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19361 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19362 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
19363 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
19364 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
19365 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
19366 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19367 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19368 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19369 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
    leright (AmS)

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19370 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19371 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19372 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19373 % \ntrianglelefteq (AmS)
19374 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19375 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19376 % \ntrianglerighteq (AmS)
19377 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19378 %* \textntrianglerighteq -> \textngeqclosed
19379 % U+22EE VERTICAL ELLIPSIS; \ellipsisvertical; \vdots (LaTeX)
19380 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19381 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19382 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19383 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19384 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
19385 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
19386 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
19387 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
19388 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

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51.2.23 Miscellaneous Technical: U+2300 to U+23FF

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19389 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
19390 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
19391 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
19392 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
19393 % U+2311 SQUARE LOZENGE; \wasyllozenge (wasysym)
19394 \DeclareTextCommand{\textwasyllozenge}{PU}{\9043\021}%* U+2311
19395 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19396 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19397 % U+231A WATCH; \clock (wasysym)
19398 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19399 %* \textclock -> \Clocklogo (marvosym)
19400 %* \textclock -> \ClockLogo (marvosym)
19401 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
19402 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19403 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
19404 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19405 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
19406 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19407 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
19408 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19409 % U+2322 FROWN; \frown (LaTeX)
19410 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19411 % U+2323 SMILE; \smile (LaTeX)
19412 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19413 % U+2328 KEYBOARD; \Keyboard (marvosym)
19414 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19415 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
19416 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19417 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
19418 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
19419 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
19420 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
19421 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
19422 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19423 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)

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19424 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
 19425 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19426 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19427 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19428 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 19429 % \notbackslash (wasysym)
 19430 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19431 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxback-
 slash (mathabx)
 19432 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19433 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19434 % \APLleftarrowbox (wasysym)
 19435 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 19436 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19437 % \APLrightarrowbox (wasysym)
 19438 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 19439 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLu-
 parrowbox (wasysym)
 19440 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19441 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19442 % \APLdownarrowbox (wasysym)
 19443 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19444 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19445 % \APLinput (wasysym)
 19446 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19447 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19448 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19449 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19450 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19451 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19452 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19453 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19454 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19455 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19456 % \ForwardToIndex (marvosym)
 19457 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19458 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19459 % \RewindToIndex (marvosym)
 19460 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19461 % U+2422 BLANK SYMBOL
 19462 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19463 % U+2423 OPEN BOX; blank
 19464 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19465 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19466 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19467 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19468 % U+2460 CIRCLED DIGIT ONE; onecircle
 19469 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19470 % U+2461 CIRCLED DIGIT TWO; twocircle

19471 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19472 % U+2462 CIRCLED DIGIT THREE; threecircle
 19473 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19474 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19475 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19476 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19477 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19478 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19479 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19480 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 19481 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19482 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19483 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19484 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19485 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19486 % U+2469 CIRCLED NUMBER TEN; tencircle
 19487 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19488 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19489 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19490 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19491 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19492 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19493 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19494 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 19495 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 19496 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 19497 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 19498 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 19499 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 19500 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 19501 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 19502 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 19503 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 19504 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 19505 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 19506 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 19507 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 19508 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 19509 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 19510 % \CircledA (marvosym)
 19511 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
 19512 %* \textCircledA -> \CleaningA
 19513 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 19514 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 19515 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 19516 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 19517 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 19518 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19519 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19520 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 19521 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19522 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19523 % \CleaningF (marvosym)
 19524 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19525 % \CleaningFF (marvosym)
 19526 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19527 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle

19528 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19529 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19530 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19531 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19532 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19533 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19534 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19535 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19536 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19537 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19538 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19539 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19540 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19541 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19542 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19543 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19544 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19545 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19546 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19547 % \CleaningP (marvosym)
 19548 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19549 % \CleaningPP (marvosym)
 19550 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19551 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19552 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19553 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19554 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19555 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19556 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19557 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19558 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19559 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19560 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19561 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19562 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19563 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19564 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19565 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19566 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19567 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19568 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19569 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19570 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19571 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19572 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19573 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19574 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19575 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19576 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19577 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19578 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19579 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19580 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19581 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19582 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19583 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19584 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6

19585 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19586 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19587 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19588 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19589 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19590 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19591 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19592 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19593 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19594 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19595 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19596 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19597 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19598 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19599 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19600 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19601 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19602 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19603 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19604 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19605 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19606 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19607 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19608 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19609 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19610 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19611 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19612 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19613 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19614 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19615 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19616 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19617 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19618 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19619 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19620 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19621 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19622 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19623 % U+24EA CIRCLED DIGIT ZERO
 19624 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19625 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19626 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19627 %* \textCuttingLine -> \Kutline (marvosym)
 19628 %* \textCuttingLine -> \CutLine (marvosym)
 19629 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19630 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19631 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19632 %* \textUParrow -> \MoveUp (marvosym)
 19633 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19634 % \bigtriangleup (LaTeX)
 19635 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19636 %* \textbigtriangleup -> \APLup (wasysym)

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19637 %* \textbigtriangleup -> \Bleech (marvosym)
19638 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
19639 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
19640 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
19641 % whiterightpointingtriangle; \triangleright (LaTeX)
19642 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
19643 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
19644 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
19645 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
19646 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
19647 %* \textDOWNarrow -> \MoveDown (marvosym)
19648 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtrian-
gle;
19649 % \bigtriangledown (LaTeX)
19650 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19651 %* \textbigtriangledown -> \APLdown (wasysym)
19652 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19653 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19654 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
19655 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19656 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19657 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19658 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19659 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19660 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19661 %* \textdiamond -> \Diamond (wasysym)
19662 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19663 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19664 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19665 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19666 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19667 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19668 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19669 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19670 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19671 % \boxbar (stmaryrd)
19672 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19673 % U+25EF LARGE CIRCLE; largecircle
19674 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19675 %* \textbigcircle -> \varbigcirc (stmaryrd)
19676 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19677 % U+2601 CLOUD; \Cloud (ifsym)
19678 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19679 % U+2605 BLACK STAR; \FiveStar (bbding)
19680 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19681 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19682 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19683 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19684 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19685 %* \textPhone -> \Telefon (marvosym)
19686 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19687 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19688 %* \textboxempty -> \Box (wasysym)

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19689 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
 19690 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
 19691 %* \textCheckedbox -> \CheckedBox (marvosym)
 19692 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
 19693 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
 19694 %* \textCrossedbox -> \XBox (wasysym)
 19695 %* \textCrossedbox -> \CrossedBox (marvosym)
 19696 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
 19697 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
 19698 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
 19699 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
 19700 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
 19701 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
 19702 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
 19703 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
 19704 %* \textHandLeft -> \rightpointleft (fourier)
 19705 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
 19706 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
 19707 %* \textHandRight -> \leftpointright (fourier)
 19708 %* \textHandRight -> \PointingHand (marvosym)
 19709 %* \textHandRight -> \Pointinghand (marvosym)
 19710 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
 19711 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
 19712 %* \textRadioactivity -> \Radiation (ifsym)
 19713 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
 19714 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
 19715 % U+2625 ANKH; \Ankh (marvosym)
 19716 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
 19717 % U+262F YIN YANG; \YinYang (marvosym)
 19718 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
 19719 %* \textYinYang -> \Yinyang (marvosym)
 19720 %* \textYinYang -> \YingYang (marvosym)
 19721 %* \textYinYang -> \Yingyang (marvosym)
 19722 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
 19723 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
 19724 %* \textfrownie -> \Frowny (marvosym)
 19725 % U+263A WHITE SMILING FACE; \smiley (wasysym)
 19726 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
 19727 %* \textsmiley -> \Smiley (marvosym)
 19728 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
 19729 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
 19730 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
 19731 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
 19732 %* \textsun -> \Sun (marvosym)
 19733 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
 19734 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
 19735 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
 19736 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
 19737 % U+263F MERCURY; \mercury (wasysym)
 19738 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
 19739 %* \textmercury -> \Mercury (marvosym)
 19740 % U+2640 FEMALE SIGN; female; \female (wasysym)
 19741 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
 19742 %* \textPUfemale -> \textfemale (tipx)
 19743 %* \textPUfemale -> \female (wasysym)
 19744 %* \textPUfemale -> \venus (wasysym)
 19745 %* \textPUfemale -> \Venus (marvosym)

19746 %* \textPUfemale -> \Female (marvosym)
 19747 % U+2641 EARTH; \earth (wasysym)
 19748 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
 19749 %* \textearth -> \Earth (marvosym)
 19750 % U+2642 MALE SIGN; \male (wasysym)
 19751 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
 19752 %* \textmale -> \mars (wasysym)
 19753 %* \textmale -> \Mars (marvosym)
 19754 %* \textmale -> \Male (marvosym)
 19755 % U+2643 JUPITER; \jupiter (wasysym)
 19756 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
 19757 %* \textjupiter -> \Jupiter (marvosym)
 19758 % U+2644 SATURN; \saturn (wasysym)
 19759 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
 19760 %* \textsaturn -> \Saturn (marvosym)
 19761 % U+2645 URANUS; \uranus (wasysym)
 19762 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
 19763 %* \texturanus -> \Uranus (marvosym)
 19764 % U+2646 NEPTUNE; \neptune (wasysym)
 19765 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
 19766 %* \textneptune -> \Neptune (marvosym)
 19767 % U+2647 PLUTO; \pluto (wasysym)
 19768 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
 19769 %* \textpluto -> \Pluto (marvosym)
 19770 % U+2648 ARIES; \aries (wasysym)
 19771 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
 19772 %* \textaries -> \Aries (marvosym)
 19773 % U+2649 TAURUS; \taurus (wasysym)
 19774 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
 19775 %* \texttaurus -> \Taurus (marvosym)
 19776 % U+264A GEMINI; \gemini (wasysym)
 19777 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
 19778 %* \textgemini -> \Gemini (marvosym)
 19779 % U+264B CANCER; \cancer (wasysym)
 19780 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
 19781 %* \textcancer -> \Cancer (marvosym)
 19782 % U+264C LEO; \leo (wasysym)
 19783 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
 19784 %* \textleo -> \Leo (marvosym)
 19785 % U+264D VIRGO; \virgo (wasysym)
 19786 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
 19787 %* \textvirgo -> \Virgo (marvosym)
 19788 % U+264E LIBRA; \libra (wasysym)
 19789 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
 19790 %* \textlibra -> \Libra (marvosym)
 19791 % U+264F SCORPIO; \scorpio (wasysym)
 19792 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
 19793 %* \textscorpio -> \Scorpio (marvosym)
 19794 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
 19795 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
 19796 %* \textsagittarius -> \Sagittarius (marvosym)
 19797 % U+2651 CAPRICORN; \capricornus (wasysym)
 19798 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
 19799 %* \textcapricornus -> \Capricorn (marvosym)
 19800 % U+2652 AQUARIUS; \aquarius (wasysym)
 19801 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
 19802 %* \textaquarius -> \Aquarius (marvosym)

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19803 % U+2653 PISCES; \pisces (wasysym)
19804 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19805 %* \textpisces -> \Pisces (marvosym)
19806 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19807 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19808 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19809 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19810 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19811 %* \textheartsuitwhite -> \Heart (marvosym)
19812 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19813 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19814 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19815 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19816 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19817 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19818 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19819 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19820 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19821 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19822 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19823 % U+2666 BLACK DIAMOND SUIT; diamond
19824 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19825 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19826 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19827 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19828 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19829 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19830 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19831 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19832 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19833 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19834 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
      note (arev)
19835 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19836 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19837 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19838 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19839 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19840 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19841 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19842 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19843 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19844 %* \textrecycle -> \Recycling (marvosym)
19845 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19846 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19847 % U+2691 BLACK FLAG; \Flag (ifsym)
19848 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19849 %* \textFlag -> \VarFlag (ifsym)
19850 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19851 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19852 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19853 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19854 %* \textdsmilitary -> \textxswup (fourier)
19855 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19856 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19857 % U+2696 SCALES; \dsjuridical (dictsym)
19858 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696

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19859 % U+2697 ALEMBIC; \dschemical (dictsym)
 19860 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19861 % U+2698 FLOWER; \dsbiological (dictsym)
 19862 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19863 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19864 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19865 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19866 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19867 % U+26A0 WARNING SIGN; \danger (fourier)
 19868 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19869 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19870 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19871 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19872 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19873 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19874 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19875 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19876 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19877 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19878 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19879 % U+26AD MARRIAGE SYMBOL
 19880 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19881 % U+26AE DIVORCE SYMBOL
 19882 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19883 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19884 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19885 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19886 % U+26B9 SEXTILE; \hexstar (wasysym)
 19887 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19888 % U+26BD SOCCER BALL; \Football (marvosym)
 19889 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19890 %* \textSoccerBall -> \Football (marvosym)
 19891 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19892 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19893 % U+26C6 RAIN; \Rain (ifsym)
 19894 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19895 % U+26D4 NO ENTRY; \noway (fourier)
 19896 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19897 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19898 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19899 % U+26FA TENT; \Tent (ifsym)
 19900 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19901 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbling)
 19902 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19903 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19904 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19905 % U+2702 BLACK SCISSORS; \ScissorRight (bbling)
 19906 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19907 %* \textScissorRight -> \RightScissors (marvosym)
 19908 %* \textScissorRight -> \Leftscissors (marvosym)
 19909 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbling)
 19910 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19911 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbling)
 19912 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704

19913 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 19914 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19915 % U+2707 TAPE DRIVE; \Tape (bding)
 19916 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19917 % U+2708 AIRPLANE; \Plane (bding)
 19918 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19919 % U+2709 ENVELOPE; \Envelope (bding),
 19920 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19921 %* \textEnvelope -> \Letter (marvosym)
 19922 % U+270C VICTORY HAND; \Peace (bding)
 19923 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19924 % U+270D WRITING HAND; \WritingHand (marvosym)
 19925 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19926 %* \textWritingHand -> \Writinghand (marvosym)
 19927 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19928 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19929 % U+270F PENCIL; \PencilRight (bding)
 19930 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19931 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19932 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19933 % U+2711 WHITE NIB; \NibRight (bding)
 19934 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19935 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19936 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19937 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19938 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19939 %* \textCheckmark -> \checkmark (MnSymbol)
 19940 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19941 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19942 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19943 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19944 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19945 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19946 % U+2717 BALLOT X; \XSolidBrush (bding)
 19947 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19948 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19949 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19950 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19951 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19952 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19953 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19954 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19955 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19956 % U+271D LATIN CROSS; \Cross (bding)
 19957 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19958 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19959 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19960 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19961 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19962 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19963 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19964 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19965 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19966 %* \textDavidStar -> \davidstar (wasysym)
 19967 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19968 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19969 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)

19970 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19971 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (b
 dding)
 19972 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19973 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (b
 bding)
 19974 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19975 % U+2726 BLACK FOUR POINTED STAR; \FourStar (b
 bding)
 19976 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19977 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (b
 bding)
 19978 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19979 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (b
 bding)
 19980 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19981 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (b
 bding)
 19982 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19983 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (b
 bding)
 19984 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19985 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (b
 bding)
 19986 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19987 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (b
 bding)
 19988 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19989 % U+272F PINWHEEL STAR; \FiveStarConvex (b
 bding)
 19990 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19991 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (b
 bding)
 19992 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19993 % U+2731 HEAVY ASTERISK; \AsteriskBold (b
 bding)
 19994 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19995 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (b
 bding)
 19996 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19997 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (b
 bding)
 19998 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19999 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (b
 bding)
 20000 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 20001 % U+2736 SIX POINTED BLACK STAR; \SixStar (b
 bding)
 20002 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 20003 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (b
 b
 ding)
 20004 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 20005 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \Eight
 StarBold (b
 bding)
 20006 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 20007 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (b
 bding)
 20008 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 20009 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (b
 bding)
 20010 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 20011 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (b
 b
 ding)
 20012 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 20013 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 20014 % \SixFlowerOpenCenter (b
 bding)
 20015 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 20016 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (b
 bding)
 20017 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 20018 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAl
 ternate (b
 bding)
 20019 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 20020 % U+273F BLACK FLORETTE; \FiveFlowerPetal (b
 bding)
 20021 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F

20022 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 20023 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 20024 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlow-
 erPetal (bding)
 20025 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 20026 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \Sunshi-
 neOpenCircled (bding)
 20027 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 20028 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlow-
 erAltPetal (bding)
 20029 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 20030 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 20031 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 20032 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 20033 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 20034 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 20035 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 20036 % U+2747 SPARKLE; \Sparkle (bding)
 20037 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 20038 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 20039 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 20040 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 20041 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 20042 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20043 % \EightFlowerPetalRemoved (bding)
 20044 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 20045 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20046 % \EightAsterisk (bding)
 20047 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20048 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20049 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20050 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20051 % \SquareShadowBottomRight (bding)
 20052 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20053 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20054 % \SquareShadowTopRight (bding)
 20055 \DeclareTextCommand{\textSquareShadowTopRight}{PU}{\9047\120}%* U+2750
 20056 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20057 % \SquareCastShadowBottomRight (bding)
 20058 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20059 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20060 % \SquareCastShadowTopRight (bding)
 20061 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20062 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bb-
 ding)
 20063 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20064 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20065 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20066 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20067 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20068 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20069 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

20070 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20071 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20072 % \notperp (mathabx)

20073 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20074 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20075 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20076 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20077 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20078 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20079 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20080 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20081 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20082 %* \textlbrackdbl -> \llbracket (stmaryrd)
 20083 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20084 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20085 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20086 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20087 % \circlearrowleft (AmS)
 20088 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20089 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20090 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20091 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20092 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20093 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20094 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 20095 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 20096 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 20097 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 20098 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20099 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \longrightarrow (AmS)
 20100 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20101 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 20102 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 20103 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20104 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20105 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 20106 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20107 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 20108 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20109 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 20110 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20111 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 20112 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20113 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 20114 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 20115 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 20116 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 20117 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 20118 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20119 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 20120 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20121 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)

20122 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 20123 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 20124 % \rcurvearrowne (MnSymbol)
 20125 \DeclareTextCommand{\texttrcurvearrowne}{PU}{\9051\064}%* U+2934
 20126 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 20127 % \lcurvearrowse (MnSymbol)
 20128 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 20129 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 20130 % \lcurvearrowsw (MnSymbol)
 20131 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 20132 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 20133 % \rcurvearrowse (MnSymbol)
 20134 \DeclareTextCommand{\texttrcurvearrowse}{PU}{\9051\067}%* U+2937
 20135 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 20136 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 20137 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 20138 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 20139 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 20140 % \rcurvearrowdown (MnSymbol)
 20141 \DeclareTextCommand{\texttrcurvearrowdown}{PU}{\9051\071}%* U+2939
 20142 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
 20143 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
 20144 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
 bol)
 20145 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
 20146 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 20147 % \rcurvearrowright (MnSymbol)
 20148 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
 20149 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
 poon (mathabx)
 20150 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 20151 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
 poon (mathabx)
 20152 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 20153 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 20154 % \updownharpoonrightleft (MnSymbol)
 20155 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 20156 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 20157 % \updownharpoonleftright (MnSymbol)
 20158 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 20159 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 20160 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 20161 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 20162 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 20163 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 20164 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 20165 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 20166 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 20167 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 20168 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20169 % WITH BARB RIGHT; \downdownharpoons (mathabx)

20170 \DeclareTextCommand{\textdownharpoons}{PU}{\9051\145}%* U+2965
 20171 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20172 % \leftbarharpoon (mathabx)
 20173 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20174 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20175 % LONG DASH; \barleftharpoon (mathabx)
 20176 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20177 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20178 % LONG DASH; \rightbarharpoon (mathabx)
 20179 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20180 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20181 % LONG DASH; \barrightharpoon (mathabx)
 20182 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20183 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20184 % WITH BARB RIGHT; \updownharpoons (mathabx)
 20185 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 20186 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 20187 % WITH BARB RIGHT; \downupharpoons (mathabx)
 20188 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 20189 % U+297F DOWN FISH TAIL
 20190 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20191 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 20192 \DeclareTextCommand{\textlparenthesis}{PU}{\9051\207}%* U+2987
 20193 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 20194 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 20195 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 20196 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 20197 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 20198 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 20199 %* \textobar -> \textvarobar (stmaryrd)
 20200 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 20201 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 20202 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 20203 %* \textobslash -> \obackslash (mathabx)
 20204 %* \textobslash -> \varobslash (stmaryrd)
 20205 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 20206 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 20207 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 20208 %* \textobot -> \odplus (ulsy)
 20209 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 20210 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 20211 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 20212 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 20213 %* \textolessthan -> \varolessthan (stmaryrd)
 20214 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 20215 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 20216 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 20217 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 20218 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 20219 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 20220 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 20221 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)

20222 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 20223 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 20224 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 20225 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 20226 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 20227 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 20228 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 20229 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 20230 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 20231 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 20232 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20233 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 20234 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 20235 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 20236 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 20237 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 20238 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 20239 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 20240 % pxfonts, wasysym)
 20241 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 20242 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 20243 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 20244 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 20245 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 20246 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 20247 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 20248 %* \textminusdot -> \divdot (mathabx)
 20249 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 20250 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 20251 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 20252 % \dtimes (mathdesign)
 20253 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 20254 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20255 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20256 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20257 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20258 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20259 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20260 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20261 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20262 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20263 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20264 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20265 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20266 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20267 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20268 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20269 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 20270 %* \textdoublevee -> \merge (stmaryrd)
 20271 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20272 % \doublebarwedge (AmS)
 20273 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20274 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20275 % \veedoublebar (mathabx)
 20276 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63

20277 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20278 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20279 % \neqdot (MnSymbol)
 20280 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20281 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20282 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20283 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20284 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20285 % \nleqslant (txfonts/pxfonts)
 20286 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20287 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20288 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 20289 % \ngeqslant (txfonts/pxfonts)
 20290 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20291 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20292 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20293 % \nlessapprox (txfonts/pxfonts)
 20294 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20295 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20296 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20297 % \ngtrapprox (txfonts/pxfonts)
 20298 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20299 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20300 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 20301 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20302 % \gneq (AmS)
 20303 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20304 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20305 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20306 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20307 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20308 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 20309 % \lesseqgtr (AmS)
 20310 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
 20311 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 20312 % \gtreqless (AmS)
 20313 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
 20314 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20315 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20316 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20317 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20318 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20319 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20320 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20321 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20322 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 20323 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20324 % \npreceq (txfonts/pxfonts)
 20325 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20326 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 20327 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20328 % \nsucceq (txfonts/pxfonts)
 20329 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338

20330 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 20331 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20332 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 20333 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20334 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20335 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20336 % \npreceqq (txfonts/pxfonts)
 20337 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20338 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20339 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20340 % \nsucceqq (txfonts/pxfonts)
 20341 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20342 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20343 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20344 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20345 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20346 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20347 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20348 % \nprecapprox (txfonts/pxfonts)
 20349 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20350 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20351 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20352 % \nsuccapprox (txfonts/pxfonts)
 20353 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20354 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
 prox (AmS)
 20355 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20356 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
 prox (AmS)
 20357 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20358 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20359 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20360 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20361 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20362 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20363 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20364 % \nsupseteqq (mathabx)
 20365 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20366 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20367 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20368 %* \textdashV -> \leftVdash (MnSymbol)
 20369 % \ndashV (mathabx)
 20370 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20371 %* \textndashV -> \nleftVdash (MnSymbol)
 20372 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20373 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20374 %* \textDashv -> \leftmodels (MnSymbol)
 20375 % \nDashv (mathabx)
 20376 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20377 %* \textnDashv -> \nleftmodels (MnSymbol)
 20378 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20379 % \DashV (mathabx)
 20380 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20381 %* \textDashV -> \leftModels (MnSymbol)
 20382 % \nDashV (mathabx)

20383 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20384 %* \textnDashV -> \nleftModels (MnSymbol)
 20385 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20386 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20387 % \downmodels (MnSymbol)
 20388 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20389 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20390 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20391 % \nupmodels (MnSymbol)
 20392 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20393 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20394 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20395 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20396 % \interleave (stmaryrd)
 20397 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20398 % U+2AFD DOUBLE SOLIDUS OPERATOR; \slash (stmaryrd)
 20399 \DeclareTextCommand{\textslash}{PU}{\9052\375}%* U+2AFD
 20400 %* \textslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20401 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20402 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20403 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20404 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20405 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20406 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20407 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20408 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20409 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20410 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20411 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20412 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20413 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20414 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20415 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20416 % \textdownstep (tipa)
 20417 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20418 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20419 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20420 %* \textPUheng -> \textheng (tipx)
 20421 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \texthookfour (tipx)
 20422 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 20423 %* \textPULhookfour -> \texthookfour (tipx)
 20424 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20425 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20426 %* \textPUscf -> \textscf (tipx)
 20427 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
 20428 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20429 %* \textPUaolig -> \textaoilig (tipx)

20430 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20431 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20432 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20433 \DeclareTextCommand{\textcircumlows}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20434 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20435 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20436 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20437 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20438 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20439 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20440 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20441 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20442 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20443 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20444 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20445 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20446 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20447 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20448 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20449 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20450 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20451 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20452 %* \textfullnote -> \Ganz (harmony)
 20453 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20454 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20455 %* \texthalfnote -> \Halb (harmony)
 20456 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20457 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20458 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20459 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20460 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20461 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20462 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20463 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20464 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20465 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20466 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20467 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20468 % U+1F468 MAN; \ManFace (marvosym)
 20469 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20470 % U+1F469 WOMAN; \WomanFace (marvosym)
 20471 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20472 %* \textWomanFace -> \Womanface (marvosym)
 20473 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20474 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20475 %* \textFax -> \Faxmachine (marvosym)
 20476 % U+1F525 FIRE; \Fire (ifsym)
 20477 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20478 % U+1F6B2 BICYCLE; \Bicycle (marvosym)

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20479 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
20480 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
20481 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
20482 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
20483 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

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51.2.45 Miscellaneous

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20484 \DeclareTextCommand{\SS}{PU}{SS}%
20485 % \textcopyleft (textcomp)
20486 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
20487 % \ccnc (ccllicenses)
20488 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
20489 % \ccnd (ccllicenses)
20490 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
20491 % \ccsa (ccllicenses)
20492 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20493 % \Info (marvosym, china2e)
20494 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20495 % \CESign (marvosym)
20496 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20497 %* \textCESign -> \CESign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20498 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20499 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20500 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20501 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20502 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20503 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20504 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20505 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

20506 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20507 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20508 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20509 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20510 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20511 \puenc)

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20512 (*puvnenc)

20513 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20514 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20515 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20516 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20517 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20518 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20519 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20520 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20521 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20522 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20523 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0

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20524 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
 20525 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
 20526 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 20527 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
 20528 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
 20529 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
 20530 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
 20531 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
 20532 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
 20533 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
 20534 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
 20535 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
 20536 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 20537 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20538 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20539 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20540 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20541 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20542 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20543 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20544 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20545 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20546 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20547 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20548 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20549 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20550 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20551 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20552 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20553 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20554 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20555 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20556 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20557 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20558 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20559 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20560 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20561 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20562 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20563 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20564 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20565 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20566 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20567 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20568 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20569 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20570 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20571 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20572 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20573 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20574 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20575 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20576 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20577 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20578 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20579 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20580 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD

20581 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20582 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20583 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20584 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20585 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20586 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20587 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20588 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20589 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20590 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20591 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20592 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20593 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20594 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20595 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20596 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20597 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20598 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20599 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20600 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20601 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20602 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20603 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20604 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20605 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20606 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20607 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20608 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20609 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20610 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20611 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20612 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 20613 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20614 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20615 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20616 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20617 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 20618 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20619 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20620 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20621 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20622 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20623 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20624 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20625 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20626 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20627 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 20628 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20629 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20630 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 20631 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 20632 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
 20633 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 20634 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 20635 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
 20636 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
 20637 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA

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20638 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20639 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20640 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20641 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20642 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
20643 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20644 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20645 </puvnenc>

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51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20646 <*puarenc>
20647 % U+0621;afii57409;ARABIC LETTER HAMZA
20648 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20649 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20650 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20651 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20652 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20653 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20654 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20655 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20656 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20657 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20658 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20659 % U+0627;afii57415;ARABIC LETTER ALEF
20660 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20661 % U+0628;afii57416;ARABIC LETTER BEH
20662 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20663 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20664 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20665 % U+062A;afii57418;ARABIC LETTER TEH
20666 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20667 % U+062B;afii57419;ARABIC LETTER THEH
20668 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20669 % U+062C;afii57420;ARABIC LETTER JEEM
20670 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20671 % U+062D;afii57421;ARABIC LETTER HAH
20672 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20673 % U+062E;afii57422;ARABIC LETTER KHAH
20674 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20675 % U+062F;afii57423;ARABIC LETTER DAL
20676 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20677 % U+0630;afii57424;ARABIC LETTER THAL
20678 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
20679 % U+0631;afii57425;ARABIC LETTER REH
20680 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
20681 % U+0632;afii57426;ARABIC LETTER ZAIN
20682 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
20683 % U+0633;afii57427;ARABIC LETTER SEEN
20684 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
20685 % U+0634;afii57428;ARABIC LETTER SHEEN
20686 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
20687 % U+0635;afii57429;ARABIC LETTER SAD
20688 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
20689 % U+0636;afii57430;ARABIC LETTER DAD

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20690 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20691 % U+0637;afii57431;ARABIC LETTER TAH
 20692 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20693 % U+0638;afii57432;ARABIC LETTER ZAH
 20694 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20695 % U+0639;afii57433;ARABIC LETTER AIN
 20696 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20697 % U+063A;afii57434;ARABIC LETTER GHAIN
 20698 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20699 % U+0640;afii57440;ARABIC TATWEEL
 20700 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20701 % U+0641;afii57441;ARABIC LETTER FEH
 20702 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20703 % U+0642;afii57442;ARABIC LETTER QAF
 20704 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20705 % U+0643;afii57443;ARABIC LETTER KAF
 20706 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20707 % U+0644;afii57444;ARABIC LETTER LAM
 20708 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20709 % U+0645;afii57445;ARABIC LETTER MEEM
 20710 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20711 % U+0646;afii57446;ARABIC LETTER NOON
 20712 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20713 % U+0647;afii57470;ARABIC LETTER HEH
 20714 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20715 % U+0648;afii57448;ARABIC LETTER WAW
 20716 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20717 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20718 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20719 % U+064A;afii57450;ARABIC LETTER YEH
 20720 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20721 % U+064B;afii57451;ARABIC FATHATAN
 20722 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20723 % U+064C;afii57452;ARABIC DAMMATAN
 20724 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20725 % U+064D;afii57453;ARABIC KASRATAN
 20726 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20727 % U+064E;afii57454;ARABIC FATHA
 20728 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20729 % U+064F;afii57455;ARABIC DAMMA
 20730 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20731 % U+0650;afii57456;ARABIC KASRA
 20732 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20733 % U+0651;afii57457;ARABIC SHADDA
 20734 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20735 % U+0652;afii57458;ARABIC SUKUN
 20736 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20737 % U+067E ARABIC LETTER PEH; afii57506
 20738 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20739 % U+0686 ARABIC LETTER TCHEH; afii57507
 20740 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20741 % U+0698 ARABIC LETTER JEH; afii57508
 20742 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20743 % U+06A9 ARABIC LETTER KEHEH
 20744 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9

20745 % U+06AF ARABIC LETTER GAF; afi57509
 20746 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20747 % U+06CC ARABIC LETTER FARSI YEH
 20748 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20749 % U+200C ZERO WIDTH NON-JOINER; afi61664
 20750 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20751 % U+200D ZERO WIDTH JOINER; afi301
 20752 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

 20753 (/puarenc)
 20754 (*psdextra)
 20755 \Hy@VersionCheck{psdextra.def}
 20756 \newcommand*{\psdmapshortnames}{%
 20757 \let\MVPlus\textMVPlus
 20758 \let\MVComma\textMVComma
 20759 \let\MVMinus\textMVMinus
 20760 \let\MVPeriod\textMVPeriod
 20761 \let\MVDivision\textMVDivision
 20762 \let\MVZero\textMVZero
 20763 \let\MVOne\textMVOne
 20764 \let\MVTwo\textMVTwo
 20765 \let\MVThree\textMVThree
 20766 \let\MVFour\textMVFour
 20767 \let\MVFive\textMVFive
 20768 \let\MVSix\textMVSix
 20769 \let\MVSeven\textMVSeven
 20770 \let\MVEight\textMVEight
 20771 \let\MVNine\textMVNine
 20772 \let\MVAt\textMVAt
 20773 \let\copyright\textcopyright
 20774 \let\twosuperior\texttwosuperior
 20775 \let\threesuperior\textthreesuperior
 20776 \let\onesuperior\textonesuperior
 20777 \let\Thorn\textThorn
 20778 \let\thorn\textthorn
 20779 \let\hbar\texthbar
 20780 \let\hausaB\texthausaB
 20781 \let\hausaD\texthausaD
 20782 \let\hausaK\texthausaK
 20783 \let\barl\textbarl
 20784 \let\inve\textinve
 20785 \let\slashc\textslashc
 20786 \let\scripta\textscripta
 20787 \let\openo\textopeno
 20788 \let\rtaild\textrtaild
 20789 \let\reve\textreve
 20790 \let\schwa\textschwa
 20791 \let\niepsilon\textniepsilon
 20792 \let\repsilon\textrepsilon
 20793 \let\rhookrepsilon\texthookrepsilon
 20794 \let\scriptg\textscriptg
 20795 \let\scg\textscg
 20796 \let\ipagamma\textipagamma
 20797 \let\babygamma\textbabygamma
 20798 \let\bari\textbari
 20799 \let\niota\textniota
 20800 \let\sci\textsci

20801 \let\scn\textscn
 20802 \let\niphi\textniphi
 20803 \let\longlegr\textlonglegr
 20804 \let\scr\textscr
 20805 \let\invscr\textinvscr
 20806 \let\esh\textesh
 20807 \let\baru\textbaru
 20808 \let\niupsilon\textniupsilon
 20809 \let\scriptv\textscriptv
 20810 \let\turnv\textturnv
 20811 \let\turnw\textturnw
 20812 \let\turny\textturny
 20813 \let\scy\textscy
 20814 \let\yogh\textyogh
 20815 \let\glotstop\textglotstop
 20816 \let\revglotstop\textrevglotstop
 20817 \let\invglotstop\textinvglotstop
 20818 \let\Gamma\textGamma
 20819 \let\Delta\textDelta
 20820 \let\Theta\textTheta
 20821 \let\Lambda\textLambda
 20822 \let\Xi\textXi
 20823 \let\Pi\textPi
 20824 \let\Sigma\textSigma
 20825 \let\Upsilon\textUpsilon
 20826 \let\Phi\textPhi
 20827 \let\Psi\textPsi
 20828 \let\Omega\textOmega
 20829 \let\alpha\textalpha
 20830 \let\beta\textbeta
 20831 \let\gamma\textgamma
 20832 \let\delta\textdelta
 20833 \let\epsilon\textepsilon
 20834 \let\zeta\textzeta
 20835 \let\eta\texteta
 20836 \let\theta\texttheta
 20837 \let\iota\textiota
 20838 \let\kappa\textkappa
 20839 \let\lambda\textlambda
 20840 \let\mu\textmu
 20841 \let\mugreek\textmugreek
 20842 \let\nu\textnu
 20843 \let\xi\textxi
 20844 \let\pi\textpi
 20845 \let\rho\textrho
 20846 \let\varsigma\textvarsigma
 20847 \let\sigma\textsigma
 20848 \let\tau\texttau
 20849 \let\upsilon\textupsilon
 20850 \let\phi\textphi
 20851 \let\chi\textchi
 20852 \let\psi\textpsi
 20853 \let\omega\textomega
 20854 \let\scd\textscd
 20855 \let\scu\textscu
 20856 \let\iinferior\textiinferior
 20857 \let\rinferior\textrinferior

20858 \let\uinferior\textuinferior
 20859 \let\vinferior\textvinferior
 20860 \let\betainferior\textbetainferior
 20861 \let\gammainferior\textgammainferior
 20862 \let\rhoinferior\textrhoinferior
 20863 \let\phiinferior\textphiinferior
 20864 \let\chiinferior\textchiinferior
 20865 \let\barsci\textbarsci
 20866 \let\barp\textbarp
 20867 \let\barscu\textbarscu
 20868 \let\htrtaild\texthtrtaild
 20869 \let\dagger\textdagger
 20870 \let\bullet\textbullet
 20871 \let\hdotfor\texthdotfor
 20872 \let\prime\textprime
 20873 \let\second\textsecond
 20874 \let\third\textthird
 20875 \let\backprime\textbackprime
 20876 \let\lefttherefore\textlefttherefore
 20877 \let\fourth\textfourth
 20878 \let\diamonddots\textdiamonddots
 20879 \let\zerosuperior\textzerosuperior
 20880 \let\isuperior\textisuperior
 20881 \let\foursuperior\textfoursuperior
 20882 \let\fivesuperior\textfivesuperior
 20883 \let\sixsuperior\textsixsuperior
 20884 \let\sevensuperior\textsevensuperior
 20885 \let\eightsuperior\texteightsuperior
 20886 \let\ninesuperior\textninesuperior
 20887 \let\plussuperior\textplussuperior
 20888 \let\minussuperior\textminussuperior
 20889 \let>equalsuperior\textequalsuperior
 20890 \let\parenleftsuperior\textparenleftsuperior
 20891 \let\parenrightsuperior\textparenrightsuperior
 20892 \let\nsuperior\textnsuperior
 20893 \let\zeroinferior\textzeroinferior
 20894 \let\oneinferior\textoneinferior
 20895 \let\twoinferior\texttwoinferior
 20896 \let\threeinferior\textthreeinferior
 20897 \let\fourinferior\textfourinferior
 20898 \let\fiveinferior\textfiveinferior
 20899 \let\sixinferior\textsixinferior
 20900 \let\seveninferior\textseveninferior
 20901 \let\eightinferior\texteightinferior
 20902 \let\nineinferior\textnineinferior
 20903 \let\plusinferior\textplusinferior
 20904 \let\minusinferior\textminusinferior
 20905 \let>equalsinferior\textequalsinferior
 20906 \let\parenleftinferior\textparenleftinferior
 20907 \let\parenrightinferior\textparenrightinferior
 20908 \let\ainferior\textainferior
 20909 \let\einferior\texteinferior
 20910 \let\oinferior\textoinferior
 20911 \let\xinferior\textxinferior
 20912 \let\schwainferior\textschwainferior
 20913 \let\hinferior\texthinferior
 20914 \let\kinferior\textkinferior

20915 \let\linferior\textlinferior
 20916 \let\minferior\textminferior
 20917 \let\ninferior\textninferior
 20918 \let\pinferior\textpinferior
 20919 \let\sinferior\textsinferior
 20920 \let\tinferior\texttinferior
 20921 \let\Deleatur\textDeleatur
 20922 \let\hslash\texthslash
 20923 \let\Im\textIm
 20924 \let\ell\textell
 20925 \let\wp\textwp
 20926 \let\Re\textRe
 20927 \let\mho\textmho
 20928 \let\riota\textriota
 20929 \let\Finv\textFinv
 20930 \let\aleph\textaleph
 20931 \let\beth\textbeth
 20932 \let\gimel\textgimel
 20933 \let\daleth\textdaleth
 20934 \let\xfax\textfax
 20935 \let\Game\textGame
 20936 \let\leftarrow\textleftarrow
 20937 \let\uparrow\textuparrow
 20938 \let\rightarrow\textrightarrow
 20939 \let\downarrow\textdownarrow
 20940 \let\leftrightarrow\textleftrightarrow
 20941 \let\updownarrow\textupdownarrow
 20942 \let\nwarrow\textnwarrow
 20943 \let\nearrow\textnearrow
 20944 \let\searrow\textsearrow
 20945 \let\swarrow\textswarrow
 20946 \let\nleftarrow\textnleftarrow
 20947 \let\nrightarrow\textnrightarrow
 20948 \let\twoheadleftarrow\texttwoheadleftarrow
 20949 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20950 \let\twoheaduparrow\texttwoheaduparrow
 20951 \let\twoheadrightarrow\texttwoheadrightarrow
 20952 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20953 \let\twoheaddownarrow\texttwoheaddownarrow
 20954 \let\leftarrowtail\textleftarrowtail
 20955 \let\rightarrowtail\textrightarrowtail
 20956 \let\mapsto\textmapsto
 20957 \let\hookleftarrow\texthookleftarrow
 20958 \let\hookrightarrow\texthookrightarrow
 20959 \let\looparrowleft\textlooparrowleft
 20960 \let\looparrowright\textlooparrowright
 20961 \let\leftrightharpoonup\textleftrightharpoonup
 20962 \let\lightning\textlightning
 20963 \let\dlsh\textdlsh
 20964 \let\curvearrowleft\textcurvearrowleft
 20965 \let\curvearrowright\textcurvearrowright
 20966 \let\leftharpoonup\textleftharpoonup
 20967 \let\leftharpoondown\textleftharpoondown
 20968 \let\upharpoonright\textupharpoonright
 20969 \let\upharpoonleft\textupharpoonleft
 20970 \let\upharpoonup\textupharpoonup
 20971 \let\upharpoondown\textupharpoondown

20972 $\backslash\text{downharpoonright}$
 20973 $\backslash\text{downharpoonleft}$
 20974 $\backslash\text{rightleftarrows}$
 20975 $\backslash\text{updownarrows}$
 20976 $\backslash\text{leftrightharpoons}$
 20977 $\backslash\text{leftleftarrows}$
 20978 $\backslash\text{upuparrows}$
 20979 $\backslash\text{rightrightarrows}$
 20980 $\backslash\text{downdownarrows}$
 20981 $\backslash\text{leftrightharpoons}$
 20982 $\backslash\text{rightleftharpoons}$
 20983 $\backslash\text{nLeftarrow}$
 20984 $\backslash\text{nLeftrightarrow}$
 20985 $\backslash\text{nRrightarrow}$
 20986 $\backslash\text{Leftarrow}$
 20987 $\backslash\text{Uparrow}$
 20988 $\backslash\text{Rrightarrow}$
 20989 $\backslash\text{Downarrow}$
 20990 $\backslash\text{Leftrightarrow}$
 20991 $\backslash\text{Updownarrow}$
 20992 $\backslash\text{Nwarrow}$
 20993 $\backslash\text{Nearrow}$
 20994 $\backslash\text{Searrow}$
 20995 $\backslash\text{Swarrow}$
 20996 $\backslash\text{Lleftarrow}$
 20997 $\backslash\text{Rrightarrow}$
 20998 $\backslash\text{leftsquigarrow}$
 20999 $\backslash\text{rightsquigarrow}$
 21000 $\backslash\text{dashleftarrow}$
 21001 $\backslash\text{dasheduparrow}$
 21002 $\backslash\text{dashrightarrow}$
 21003 $\backslash\text{dasheddownarrow}$
 21004 $\backslash\text{pointer}$
 21005 $\backslash\text{downuparrows}$
 21006 $\backslash\text{leftarrowtriangle}$
 21007 $\backslash\text{rightarrowtriangle}$
 21008 $\backslash\text{leftrightarrowtriangle}$
 21009 $\backslash\text{forall}$
 21010 $\backslash\text{complement}$
 21011 $\backslash\text{partial}$
 21012 $\backslash\text{exists}$
 21013 $\backslash\text{nexists}$
 21014 $\backslash\text{emptyset}$
 21015 $\backslash\text{triangle}$
 21016 $\backslash\text{nabla}$
 21017 $\backslash\text{in}$
 21018 $\backslash\text{notin}$
 21019 $\backslash\text{smallin}$
 21020 $\backslash\text{ni}$
 21021 $\backslash\text{notowner}$
 21022 $\backslash\text{smallowns}$
 21023 $\backslash\text{prod}$
 21024 $\backslash\text{amalg}$
 21025 $\backslash\text{sum}$
 21026 $\backslash\text{mp}$
 21027 $\backslash\text{dotplus}$
 21028 $\backslash\text{Divides}$

21029 \let\DividesNot\textDividesNot
 21030 \let\setminus\textsetminus
 21031 \let\ast\textast
 21032 \let\circ\textcirc
 21033 \let\surd\textsurd
 21034 \let\propto\textpropto
 21035 \let\infty\textinfty
 21036 \let\angle\textangle
 21037 \let\measuredangle\textmeasuredangle
 21038 \let\sphericalangle\textsphericalangle
 21039 \let\mid\textmid
 21040 \let\nmid\textnmid
 21041 \let\parallel\textparallel
 21042 \let\nparallel\textnparallel
 21043 \let\wedge\textwedge
 21044 \let\owedge\textowedge
 21045 \let\vee\textvee
 21046 \let\ovee\textovee
 21047 \let\cap\textcap
 21048 \let\cup\textcup
 21049 \let\int\textint
 21050 \let\iint\textiint
 21051 \let\iiint\textiiint
 21052 \let\oint\textoint
 21053 \let\oiint\textoiint
 21054 \let\ointclockwise\textointclockwise
 21055 \let\ointctrlockwise\textointctrlockwise
 21056 \let\therefore\texttherefore
 21057 \let\because\textbecause
 21058 \let\vdots\textvdots
 21059 \let\squaredots\textsquaredots
 21060 \let\dotminus\textdotminus
 21061 \let\eqcolon\texteqcolon
 21062 \let\sim\textsim
 21063 \let\backsim\textbacksim
 21064 \let\nbacksim\textnbacksim
 21065 \let\wr\textwr
 21066 \let\sim\textsim
 21067 \let\eqsim\texteqsim
 21068 \let\neqsim\textneqsim
 21069 \let\simeq\textsimeq
 21070 \let\nsimeq\textnsimeq
 21071 \let\cong\textcong
 21072 \let\ncong\textncong
 21073 \let\approx\textapprox
 21074 \let\napprox\textnapprox
 21075 \let\approxeq\textapproxeq
 21076 \let\napproxeq\textnapproxeq
 21077 \let\triplesim\texttriplesim
 21078 \let\ntriplesim\textntriplesim
 21079 \let\backcong\textbackcong
 21080 \let\nbackcong\textnbackcong
 21081 \let\asymp\textasymp
 21082 \let\nasymp\textnasymp
 21083 \let\Bumpeq\textBumpeq
 21084 \let\NBumpeq\textNBumpeq
 21085 \let\bumpeq\textbumpeq

21086 \let\nbumpeq\textnbumpeq
 21087 \let\doteq\textdoteq
 21088 \let\ndoteq\textndoteq
 21089 \let\doteqdot\textdoteqdot
 21090 \let\ndoteq\textndoteq
 21091 \let\fallingdoteq\textfallingdoteq
 21092 \let\ntfallingdoteq\textntfallingdoteq
 21093 \let\risingdoteq\textrisingdoteq
 21094 \let\ntrisingdoteq\textntrisingdoteq
 21095 \let\colonequals\textcolonequals
 21096 \let\equalscolon\textequalscolon
 21097 \let\eqcirc\texteqcirc
 21098 \let\neqcirc\textneqcirc
 21099 \let\circeq\textcirceq
 21100 \let\ncirceq\textncirceq
 21101 \let\hateq\texthateq
 21102 \let\nhateq\textnhateq
 21103 \let\triangleeq\texttriangleeq
 21104 \let\neq\textneq
 21105 \let\ne\textne
 21106 \let\equiv\textequiv
 21107 \let\nequiv\textnequiv
 21108 \let\leq\textleq
 21109 \let\le\textle
 21110 \let\geq\textgeq
 21111 \let\ge\textge
 21112 \let\leqq\textleqq
 21113 \let\lneqq\textlneqq
 21114 \let\geqq\textgeqq
 21115 \let\ngqq\textngqq
 21116 \let\lneqq\textlneqq
 21117 \let\gneqq\textgneqq
 21118 \let\ll\textll
 21119 \let\nll\textnll
 21120 \let\gg\textgg
 21121 \let\ngg\textngg
 21122 \let\between\textbetween
 21123 \let\nless\textnless
 21124 \let\ngtr\textngtr
 21125 \let\lneq\textlneq
 21126 \let\ngeq\textngeq
 21127 \let\lesssim\textlessim
 21128 \let\gtrsim\textgtrsim
 21129 \let\nlessim\textnlessim
 21130 \let\ngtrsim\textngtrsim
 21131 \let\lessgtr\textlessgtr
 21132 \let\gtrless\textgtrless
 21133 \let\ngtrless\textngtrless
 21134 \let\nlessgtr\textnlessgtr
 21135 \let\prec\textprec
 21136 \let\succ\textsucc
 21137 \let\preccurlyeq\textpreccurlyeq
 21138 \let\succcurlyeq\textsucccurlyeq
 21139 \let\precsim\textprecsim
 21140 \let\ntprecsim\textntprecsim
 21141 \let\succsim\textsuccsim
 21142 \let\ntsuccsim\textntsuccsim

21143 `\let\nprec\textnprec`
 21144 `\let\nsucc\textnsucc`
 21145 `\let\subset\textsubset`
 21146 `\let\supset\textsupset`
 21147 `\let\nsubset\textnsubset`
 21148 `\let\nsupset\textnsupset`
 21149 `\let\subseteq\textsubseteq`
 21150 `\let\supseteq\textsupseteq`
 21151 `\let\nsubseteq\textnsubseq`
 21152 `\let\nsupseteq\textnsupseteq`
 21153 `\let\subsetneq\textsubsetneq`
 21154 `\let\supsetneq\textsupsetneq`
 21155 `\let\cupdot\textcupdot`
 21156 `\let\cupplus\textcupplus`
 21157 `\let\sqsubset\textsqsubset`
 21158 `\let\nsqsubset\textnsqsubset`
 21159 `\let\sqsupset\textsqsupset`
 21160 `\let\nsqsupset\textnsqsupset`
 21161 `\let\sqsubseq\textsqsubseq`
 21162 `\let\nsqsubseq\textnsqsubseq`
 21163 `\let\sqsupseq\textsqsupseq`
 21164 `\let\nsqsupseq\textnsqsupseq`
 21165 `\let\sqcap\textsqcap`
 21166 `\let\sqcup\textsqcup`
 21167 `\let\oplus\textoplus`
 21168 `\let\ominus\textominus`
 21169 `\let\otimes\textotimes`
 21170 `\let\oslash\textoslash`
 21171 `\let\odot\textodot`
 21172 `\let\circledcirc\textcircledcirc`
 21173 `\let\circledast\textcircledast`
 21174 `\let\circleddash\textcircleddash`
 21175 `\let\boxplus\textboxplus`
 21176 `\let\boxminus\textboxminus`
 21177 `\let\boxtimes\textboxtimes`
 21178 `\let\boxdot\textboxdot`
 21179 `\let\vdash\textvdash`
 21180 `\let\dashv\textdashv`
 21181 `\let\ndashv\textndashv`
 21182 `\let\top\texttop`
 21183 `\let\ndownvdash\textndownvdash`
 21184 `\let\bot\textbot`
 21185 `\let\nupvdash\textnupvdash`
 21186 `\let\vDash\textvDash`
 21187 `\let\Vdash\textVdash`
 21188 `\let\Vvdash\textVvdash`
 21189 `\let\NVdash\textNVdash`
 21190 `\let\VDash\textVDash`
 21191 `\let\Nvdash\textNvdash`
 21192 `\let\NVDash\textNVDash`
 21193 `\let\NVdash\textNVdash`
 21194 `\let\NVDash\textNVDash`
 21195 `\let\lhd\textlhd`
 21196 `\let\rhd\textrhd`
 21197 `\let\unlhd\textunlhd`
 21198 `\let\unrhd\textunrhd`
 21199 `\let\multimapdotbothA\textmultimapdotbothA`

21200 $\backslash\mathrm{multimapdotbothB}$
 21201 $\backslash\mathrm{multimap}$
 21202 $\backslash\mathrm{veebar}$
 21203 $\backslash\mathrm{barwedge}$
 21204 $\backslash\mathrm{star}$
 21205 $\backslash\mathrm{divideontimes}$
 21206 $\backslash\mathrm{bowtie}$
 21207 $\backslash\mathrm{ltimes}$
 21208 $\backslash\mathrm{rtimes}$
 21209 $\backslash\mathrm{leftthreetimes}$
 21210 $\backslash\mathrm{rightthreetimes}$
 21211 $\backslash\mathrm{backsimeq}$
 21212 $\backslash\mathrm{nbacksimeq}$
 21213 $\backslash\mathrm{curlyvee}$
 21214 $\backslash\mathrm{curlywedge}$
 21215 $\backslash\mathrm{Subset}$
 21216 $\backslash\mathrm{nSubset}$
 21217 $\backslash\mathrm{Supset}$
 21218 $\backslash\mathrm{nSupset}$
 21219 $\backslash\mathrm{Cap}$
 21220 $\backslash\mathrm{Cup}$
 21221 $\backslash\mathrm{pitchfork}$
 21222 $\backslash\mathrm{lessdot}$
 21223 $\backslash\mathrm{gtrdot}$
 21224 $\backslash\mathrm{lll}$
 21225 $\backslash\mathrm{ggg}$
 21226 $\backslash\mathrm{lesseqgtr}$
 21227 $\backslash\mathrm{gtreqless}$
 21228 $\backslash\mathrm{curlyeqprec}$
 21229 $\backslash\mathrm{ncurlyeqprec}$
 21230 $\backslash\mathrm{curlyeqsucc}$
 21231 $\backslash\mathrm{ncurlyeqsucc}$
 21232 $\backslash\mathrm{npreccurlyeq}$
 21233 $\backslash\mathrm{nsucccurlyeq}$
 21234 $\backslash\mathrm{nqsubseteq}$
 21235 $\backslash\mathrm{nqsupseteq}$
 21236 $\backslash\mathrm{sqsubsetneq}$
 21237 $\backslash\mathrm{sqsupsetneq}$
 21238 $\backslash\mathrm{lnsim}$
 21239 $\backslash\mathrm{gnsim}$
 21240 $\backslash\mathrm{precnsim}$
 21241 $\backslash\mathrm{succnsim}$
 21242 $\backslash\mathrm{ntriangleleft}$
 21243 $\backslash\mathrm{ntriangleright}$
 21244 $\backslash\mathrm{ntrianglelefteq}$
 21245 $\backslash\mathrm{ntrianglerighteq}$
 21246 $\backslash\mathrm{vdots}$
 21247 $\backslash\mathrm{cdots}$
 21248 $\backslash\mathrm{udots}$
 21249 $\backslash\mathrm{ddots}$
 21250 $\backslash\mathrm{barin}$
 21251 $\backslash\mathrm{diameter}$
 21252 $\backslash\mathrm{backneg}$
 21253 $\backslash\mathrm{wasylzenge}$
 21254 $\backslash\mathrm{invbackneg}$
 21255 $\backslash\mathrm{clock}$
 21256 $\backslash\mathrm{ulcorner}$

21257 \let\urcorner\texturcorner
 21258 \let\llcorner\textllcorner
 21259 \let\lrcorner\textlrcorner
 21260 \let\frown\textfrown
 21261 \let\smile\textsmile
 21262 \let\Keyboard\textKeyboard
 21263 \let\langle\textlangle
 21264 \let\rangle\textrangle
 21265 \let\APLinv\textAPLinv
 21266 \let\Tumbler\textTumbler
 21267 \let\notslash\textnotslash
 21268 \let\notbackslash\textnotbackslash
 21269 \let\boxbackslash\textboxbackslash
 21270 \let\APLleftarrowbox\textAPLleftarrowbox
 21271 \let\APLrightarrowbox\textAPLrightarrowbox
 21272 \let\APLuparrowbox\textAPLuparrowbox
 21273 \let\APLdownarrowbox\textAPLdownarrowbox
 21274 \let\APLinput\textAPLinput
 21275 \let\Request\textRequest
 21276 \let\Beam\textBeam
 21277 \let\hexagon\texthexagon
 21278 \let\APLbox\textAPLbox
 21279 \let\ForwardToIndex\textForwardToIndex
 21280 \let\RewindToIndex\textRewindToIndex
 21281 \let\bbslash\textbbslash
 21282 \let\CircledA\textCircledA
 21283 \let\CleaningF\textCleaningF
 21284 \let\CleaningFF\textCleaningFF
 21285 \let\CleaningP\textCleaningP
 21286 \let\CleaningPP\textCleaningPP
 21287 \let\CuttingLine\textCuttingLine
 21288 \let\UParrow\textUParrow
 21289 \let\bigtriangleup\textbigtriangleup
 21290 \let\Forward\textForward
 21291 \let\triangleright\texttriangleright
 21292 \let\RHD\textRHD
 21293 \let\DOWNarrow\textDOWNarrow
 21294 \let\bigtriangledown\textbigtriangledown
 21295 \let\Rewind\textRewind
 21296 \let\triangleleft\texttriangleleft
 21297 \let\LHD\textLHD
 21298 \let\diamond\textdiamond
 21299 \let\lozenge\textlozenge
 21300 \let\LEFTCIRCLE\textLEFTCIRCLE
 21301 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21302 \let\openbullet\textopenbullet
 21303 \let\boxbar\textboxbar
 21304 \let\bigcircle\textbigcircle
 21305 \let\Cloud\textCloud
 21306 \let\FiveStar\textFiveStar
 21307 \let\FiveStarOpen\textFiveStarOpen
 21308 \let\Phone\textPhone
 21309 \let\boxempty\textboxempty
 21310 \let\Checkedbox\textCheckedbox
 21311 \let\Crossedbox\textCrossedbox
 21312 \let\Coffeecup\textCoffeecup
 21313 \let\HandCuffLeft\textHandCuffLeft

21314 \let\HandCuffRight\textHandCuffRight
 21315 \let\HandLeft\textHandLeft
 21316 \let\HandRight\textHandRight
 21317 \let\Radioactivity\textRadioactivity
 21318 \let\Biohazard\textBiohazard
 21319 \let\Ankh\textAnkh
 21320 \let\YinYang\textYinYang
 21321 \let\frownie\textfrownie
 21322 \let\smiley\textsmiley
 21323 \let\blacksmiley\textblacksmiley
 21324 \let\sun\textsun
 21325 \let\leftmoon\textleftmoon
 21326 \let\rightmoon\textrightmoon
 21327 \let\mercury\textmercury
 21328 \let\earth\textearth
 21329 \let\male\textmale
 21330 \let\jupiter\textjupiter
 21331 \let\saturn\textsaturn
 21332 \let\uranus\texturanus
 21333 \let\neptune\textneptune
 21334 \let\pluto\textpluto
 21335 \let\aries\textaries
 21336 \let\taurus\texttaurus
 21337 \let\gemini\textgemini
 21338 \let\cancer\textcancer
 21339 \let\leo\textleo
 21340 \let\virgo\textvirgo
 21341 \let\libra\textlibra
 21342 \let\scorpio\textscorpio
 21343 \let\sagittarius\textsagittarius
 21344 \let\capricornus\textcapricornus
 21345 \let\aquarius\textaquarius
 21346 \let\pisces\textpisces
 21347 \let\quarternote\textquarternote
 21348 \let\twonotes\texttwonotes
 21349 \let\sixteenthnote\textsixteenthnote
 21350 \let\flat\textflat
 21351 \let\natural\textnatural
 21352 \let\sharp\textsharp
 21353 \let\recycle\textrecycle
 21354 \let\Wheelchair\textWheelchair
 21355 \let\Flag\textFlag
 21356 \let\MineSign\textMineSign
 21357 \let\ds\textds
 21358 \let\ds\textds
 21359 \let\ds\textds
 21360 \let\ds\textds
 21361 \let\ds\textds
 21362 \let\ds\textds
 21363 \let\manstar\textmanstar
 21364 \let\danger\textdanger
 21365 \let\FemaleFemale\textFemaleFemale
 21366 \let\MaleMale\textMaleMale
 21367 \let\FemaleMale\textFemaleMale
 21368 \let\Hermaphrodite\textHermaphrodite
 21369 \let\Neutral\textNeutral
 21370 \let\hexstar\texthexstar

21371 \let\SunCloud\textSunCloud
 21372 \let\Rain\textRain
 21373 \let\noway\textnoway
 21374 \let\Mountain\textMountain
 21375 \let\Tent\textTent
 21376 \let\ScissorRight\textScissorRight
 21377 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21378 \let\ScissorHollowRight\textScissorHollowRight
 21379 \let\PhoneHandset\textPhoneHandset
 21380 \let\Tape\textTape
 21381 \let\Plane\textPlane
 21382 \let\Envelope\textEnvelope
 21383 \let\Peace\textPeace
 21384 \let\WritingHand\textWritingHand
 21385 \let\PencilRightDown\textPencilRightDown
 21386 \let\PencilRight\textPencilRight
 21387 \let\PencilRightUp\textPencilRightUp
 21388 \let\NibRight\textNibRight
 21389 \let\NibSolidRight\textNibSolidRight
 21390 \let\Checkmark\textCheckmark
 21391 \let\CheckmarkBold\textCheckmarkBold
 21392 \let\XSolid\textXSolid
 21393 \let\XSolidBold\textXSolidBold
 21394 \let\XSolidBrush\textXSolidBrush
 21395 \let\PlusOutline\textPlusOutline
 21396 \let\Plus\textPlus
 21397 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21398 \let\PlusCenterOpen\textPlusCenterOpen
 21399 \let\Cross\textCross
 21400 \let\CrossOpenShadow\textCrossOpenShadow
 21401 \let\CrossOutline\textCrossOutline
 21402 \let\CrossMaltese\textCrossMaltese
 21403 \let\DavidStar\textDavidStar
 21404 \let\FourAsterisk\textFourAsterisk
 21405 \let\JackStar\textJackStar
 21406 \let\JackStarBold\textJackStarBold
 21407 \let\ClowerTips\textClowerTips
 21408 \let\FourStar\textFourStar
 21409 \let\FourStarOpen\textFourStarOpen
 21410 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21411 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21412 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21413 \let\FiveStarOutline\textFiveStarOutline
 21414 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21415 \let\FiveStarConvex\textFiveStarConvex
 21416 \let\FiveStarShadow\textFiveStarShadow
 21417 \let\AsteriskBold\textAsteriskBold
 21418 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21419 \let\EightStarTaper\textEightStarTaper
 21420 \let\EightStarConvex\textEightStarConvex
 21421 \let\SixStar\textSixStar
 21422 \let\EightStar\textEightStar
 21423 \let\EightStarBold\textEightStarBold
 21424 \let\TwelveStar\textTwelveStar
 21425 \let\SixteenStarLight\textSixteenStarLight
 21426 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21427 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter

21428 \let\Asterisk\textAsterisk
 21429 \let\SixFlowerAlternate\textSixFlowerAlternate
 21430 \let\FiveFlowerPetal\textFiveFlowerPetal
 21431 \let\FiveFlowerOpen\textFiveFlowerOpen
 21432 \let\EightFlowerPetal\textEightFlowerPetal
 21433 \let\SunshineOpenCircled\textSunshineOpenCircled
 21434 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21435 \let\SnowflakeChevron\textSnowflakeChevron
 21436 \let\Snowflake\textSnowflake
 21437 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21438 \let\Sparkle\textSparkle
 21439 \let\SparkleBold\textSparkleBold
 21440 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21441 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21442 \let\EightAsterisk\textEightAsterisk
 21443 \let\CircleShadow\textCircleShadow
 21444 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21445 \let\SquareTopRight\textSquareTopRight
 21446 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21447 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21448 \let\DiamandSolid\textDiamandSolid
 21449 \let\RectangleThin\textRectangleThin
 21450 \let\Rectangle\textRectangle
 21451 \let\RectangleBold\textRectangleBold
 21452 \let\perp\textperp
 21453 \let\notperp\textnotperp
 21454 \let\veedot\textveedot
 21455 \let\wedgedot\textwedgedot
 21456 \let\leftspoon\textleftspoon
 21457 \let\lbrackdbl\textlbrackdbl
 21458 \let\rbrackdbl\textrbrackdbl
 21459 \let\circlearrowleft\textcirclearrowleft
 21460 \let\circlearrowright\textcirclearrowright
 21461 \let\longleftarrow\textlongleftarrow
 21462 \let\longrightarrow\textlongrightarrow
 21463 \let\longlefttrightarrow\textlonglefttrightarrow
 21464 \let\Longleftarrow\textLongleftarrow
 21465 \let\Longrightarrow\textLongrightarrow
 21466 \let\Longlefttrightarrow\textLonglefttrightarrow
 21467 \let\longmapsto\textlongmapsto
 21468 \let\Longmapsfrom\textLongmapsfrom
 21469 \let\Longmapsto\textLongmapsto
 21470 \let\nwsearrow\textnwsearrow
 21471 \let\neswarrow\textneswarrow
 21472 \let\lhooknwarrow\textlhooknwarrow
 21473 \let\rhooknarrow\texthooknarrow
 21474 \let\lhooksearrow\textlhooksearrow
 21475 \let\rhookswarrow\texthookswarrow
 21476 \let\leadsto\textleadsto
 21477 \let\rcurvearrowne\textrcurvearrowne
 21478 \let\lcurvearrowse\textlcurvearrowse
 21479 \let\lcurvearrowsw\textlcurvearrowsw
 21480 \let\rcurvearrowse\textrcurvearrowse
 21481 \let\lcurvearrowdown\textlcurvearrowdown
 21482 \let\rcurvearrowdown\textrcurvearrowdown
 21483 \let\rcurvearrowleft\textrcurvearrowleft
 21484 \let\rcurvearrowright\textrcurvearrowright

21485 $\backslash\text{leftrightharpoon}\backslash\text{textleftrightharpoon}$
 21486 $\backslash\text{rightleftharpoon}\backslash\text{textrightleftharpoon}$
 21487 $\backslash\text{updownharpoonrightleft}\backslash\text{textupdownharpoonrightleft}$
 21488 $\backslash\text{updownharpoonleftright}\backslash\text{textupdownharpoonleftright}$
 21489 $\backslash\text{leftleftharpoons}\backslash\text{textleftleftharpoons}$
 21490 $\backslash\text{upupharpoons}\backslash\text{textupupharpoons}$
 21491 $\backslash\text{rightrightarpoons}\backslash\text{textrighttrightarpoons}$
 21492 $\backslash\text{downdownharpoons}\backslash\text{textdowndownharpoons}$
 21493 $\backslash\text{leftbarharpoon}\backslash\text{textleftbarharpoon}$
 21494 $\backslash\text{barleftharpoon}\backslash\text{textbarleftharpoon}$
 21495 $\backslash\text{rightbarharpoon}\backslash\text{textrightbarharpoon}$
 21496 $\backslash\text{barrightharpoon}\backslash\text{textbarrightharpoon}$
 21497 $\backslash\text{updownharpoons}\backslash\text{textupdownharpoons}$
 21498 $\backslash\text{downupharpoons}\backslash\text{textdownupharpoons}$
 21499 $\backslash\text{moo}\backslash\text{textmoo}$
 21500 $\backslash\text{llparenthesis}\backslash\text{textllparenthesis}$
 21501 $\backslash\text{rrparenthesis}\backslash\text{textrrparenthesis}$
 21502 $\backslash\text{invdiameter}\backslash\text{textinvdiameter}$
 21503 $\backslash\text{oobar}\backslash\text{textobar}$
 21504 $\backslash\text{obslash}\backslash\text{textobslash}$
 21505 $\backslash\text{obot}\backslash\text{textobot}$
 21506 $\backslash\text{NoChemicalCleaning}\backslash\text{textNoChemicalCleaning}$
 21507 $\backslash\text{olessthan}\backslash\text{textolessthan}$
 21508 $\backslash\text{ogreaterthan}\backslash\text{textogreaterthan}$
 21509 $\backslash\text{boxslash}\backslash\text{textboxslash}$
 21510 $\backslash\text{boxbslash}\backslash\text{textboxbslash}$
 21511 $\backslash\text{boxast}\backslash\text{textboxast}$
 21512 $\backslash\text{boxcircle}\backslash\text{textboxcircle}$
 21513 $\backslash\text{boxbox}\backslash\text{textboxbox}$
 21514 $\backslash\text{Valve}\backslash\text{textValve}$
 21515 $\backslash\text{multimapboth}\backslash\text{textmultimapboth}$
 21516 $\backslash\text{shuffle}\backslash\text{textshuffle}$
 21517 $\backslash\text{uplus}\backslash\text{textuplus}$
 21518 $\backslash\text{bigdoublewedge}\backslash\text{textbigdoublewedge}$
 21519 $\backslash\text{bigdoublevee}\backslash\text{textbigdoublevee}$
 21520 $\backslash\text{Join}\backslash\text{textJoin}$
 21521 $\backslash\text{fatsemi}\backslash\text{textfatsemi}$
 21522 $\backslash\text{circplus}\backslash\text{textcircplus}$
 21523 $\backslash\text{minusdot}\backslash\text{textminusdot}$
 21524 $\backslash\text{dotimes}\backslash\text{textdotimes}$
 21525 $\backslash\text{dtimes}\backslash\text{textdtimes}$
 21526 $\backslash\text{odiv}\backslash\text{textodiv}$
 21527 $\backslash\text{invneg}\backslash\text{textinvneg}$
 21528 $\backslash\text{sqdoublecap}\backslash\text{textsquaddoublecap}$
 21529 $\backslash\text{capdot}\backslash\text{textcapdot}$
 21530 $\backslash\text{sqdoublecup}\backslash\text{textsquaddoublecup}$
 21531 $\backslash\text{doublewedge}\backslash\text{textdoublewedge}$
 21532 $\backslash\text{doublevee}\backslash\text{textdoublevee}$
 21533 $\backslash\text{doublebarwedge}\backslash\text{textdoublebarwedge}$
 21534 $\backslash\text{veedoublebar}\backslash\text{textveedoublebar}$
 21535 $\backslash\text{eqdot}\backslash\text{texteqdot}$
 21536 $\backslash\text{neqdot}\backslash\text{textneqdot}$
 21537 $\backslash\text{coloncolonequals}\backslash\text{textcoloncolonequals}$
 21538 $\backslash\text{leqslant}\backslash\text{textleqslant}$
 21539 $\backslash\text{nleqslant}\backslash\text{textnleqslant}$
 21540 $\backslash\text{geqslant}\backslash\text{textgeqslant}$
 21541 $\backslash\text{ngeqslant}\backslash\text{textngeqslant}$

21542 \let\lessapprox\textlessapprox
 21543 \let\nlessapprox\textnlessapprox
 21544 \let\gtrapprox\textgtrapprox
 21545 \let\ngtrapprox\textngtrapprox
 21546 \let\lneq\textlneq
 21547 \let\gneq\textgneq
 21548 \let\lnapprox\textlnapprox
 21549 \let\gnapprox\textgnapprox
 21550 \let\lesseqgtr\textlesseqgtr
 21551 \let\gtreqless\textgtreqless
 21552 \let\eqslantless\texteqslantless
 21553 \let\eqslantgtr\texteqslantgtr
 21554 \let\leftslice\textleftslice
 21555 \let\rightslice\textright slice
 21556 \let\preceq\textpreceq
 21557 \let\npreceq\textnpreceq
 21558 \let\succeq\textsucceq
 21559 \let\nsucceq\textnsucceq
 21560 \let\precneq\textprecneq
 21561 \let\succneq\textsuccneq
 21562 \let\preceqq\textpreceqq
 21563 \let\npreceqq\textnpreceqq
 21564 \let\succeqq\textsucceqq
 21565 \let\nsucceqq\textnsucceqq
 21566 \let\precneqq\textprecneqq
 21567 \let\succneqq\textsuccneqq
 21568 \let\precapprox\textprecapprox
 21569 \let\nprecapprox\textnprecapprox
 21570 \let\succapprox\textsuccapprox
 21571 \let\nsuccapprox\textnsuccapprox
 21572 \let\precnapprox\textprecnapprox
 21573 \let\succnapprox\textsuccnapprox
 21574 \let\subse teqq\textsubse teqq
 21575 \let\nsubse teqq\textnsubse teqq
 21576 \let\supse teqq\textsupse teqq
 21577 \let\nsupse teqq\textnsupse teqq
 21578 \let\dashV\textdashV
 21579 \let\ndashV\textndashV
 21580 \let\Dashv\textDashv
 21581 \let\ndashv\textndashv
 21582 \let\DashV\textDashV
 21583 \let\ndashV\textndashV
 21584 \let\downmodels\textdownmodels
 21585 \let\ndownmodels\textndownmodels
 21586 \let\upmodels\textupmodels
 21587 \let\nupmodels\textnupmodels
 21588 \let\upspoon\textupspoon
 21589 \let\interleave\textinterleave
 21590 \let\slash\textslash
 21591 \let\pentagon\textpentagon
 21592 \let\varhexagon\textvarhexagon
 21593 \let\jinferior\textjinferior
 21594 \let\slashdiv\textslashdiv
 21595 \let\fivedots\textfivedots
 21596 \let\oo\textoo
 21597 \let\GaPa\textGaPa
 21598 \let\HaPa\textHaPa

21599 \let\ViPa\textViPa
 21600 \let\AcPa\textAcPa
 21601 \let\SePa\textSePa
 21602 \let\ZwPa\textZwPa
 21603 \let\fullnote\textfullnote
 21604 \let\halfnote\texthalfnote
 21605 \let\Vier\textVier
 21606 \let\Acht\textAcht
 21607 \let\Sech\textSech
 21608 \let\Zwdr\textZwdr
 21609 \let\Mundus\textMundus
 21610 \let\Moon\textMoon
 21611 \let\ManFace\textManFace
 21612 \let\WomanFace\textWomanFace
 21613 \let\Fax\textFax
 21614 \let\Fire\textFire
 21615 \let\Bicycle\textBicycle
 21616 \let\Gentsroom\textGentsroom
 21617 \let\Ladiesroom\textLadiesroom
 21618 \let\ccnc\textccnc
 21619 \let\ccsa\textccsa
 21620 \let\Info\textInfo
 21621 \let\CESign\textCESign
 21622 \let\neg\textneg
 21623 \let\times\texttimes
 21624 \let\div\textdiv
 21625 \let\pm\textpm
 21626 \let\cdot\textcdot
 21627 }% \psdmapshortnames
 21628 \newcommand*{\psdaliasnames}{%
 21629 \let\epsdice\HyPsd@DieFace
 21630 \let\fcdice\HyPsd@DieFace
 21631 \let\MoonPha\HyPsd@MoonPha
 21632 \let\mathdollar\textdollar
 21633 \let\EyesDollar\textdollar
 21634 \let\binampersand\textampersand
 21635 \let\with\textampersand
 21636 \let\mathunderscore\textunderscore
 21637 \let\textvertline\textbar
 21638 \let\mathsterling\textsterling
 21639 \let\pounds\textsterling
 21640 \let\brokenvert\textbrokenbar
 21641 \let\mathsection\textsection
 21642 \let\S\textsection
 21643 \let\mathparagraph\textparagraph
 21644 \let\MultiplicationDot\textperiodcentered
 21645 \let\Squaredot\textperiodcentered
 21646 \let\vartimes\textmultiply
 21647 \let\MVMultiplication\textmultiply
 21648 \let\eth\dh
 21649 \let\crossd\textcrd
 21650 \let\textbard\textcrd
 21651 \let\bard\textcrd
 21652 \let\textcrh\textthbar
 21653 \let\crossh\textthbar
 21654 \let\planck\textthbar
 21655 \let\eng\ng

21656 \let\engma\ng
 21657 \let\crossb\textcrb
 21658 \let\textbarb\textcrb
 21659 \let\barb\textcrb
 21660 \let\Florin\textflorin
 21661 \let\hv\texthvlig
 21662 \let\hausak\texthtk
 21663 \let\crossnilambda\textcrlambda
 21664 \let\barlambda\textcrlambda
 21665 \let\lambdabar\textcrlambda
 21666 \let\lambdaslash\textcrlambda
 21667 \let\textnrleg\textPUnrleg
 21668 \let\textpipevar\textpipe
 21669 \let\textdoublepipevar\textdoublepipe
 21670 \let\textdoublebarpipevar\textdoublebarpipe
 21671 \let\textcrg\textgslash
 21672 \let\textdblig\textPUdblig
 21673 \let\textqplig\textPUqplig
 21674 \let\textcentoldstyle\textslashc
 21675 \let\textbarc\textslashc
 21676 \let\inva\textturna
 21677 \let\vara\textscripta
 21678 \let\invscripta\textturnscripta
 21679 \let\rotvara\textturnscripta
 21680 \let\hookb\texthtb
 21681 \let\hausab\texthtb
 21682 \let\varopeno\textopeno
 21683 \let\curlyc\textctc
 21684 \let\taild\textrtaild
 21685 \let\hookd\texthtd
 21686 \let\hausad\texthtd
 21687 \let\er\textrhooschwa
 21688 \let\epsi\textniepsilon
 21689 \let\hookrepsilon\textrhooschwa
 21690 \let\closedrepsilon\textcloserepsilon
 21691 \let\barj\textbardotlessj
 21692 \let\hookg\texthtg
 21693 \let\varg\textscriptg
 21694 \let\vod\textipagamma
 21695 \let\invh\textturnh
 21696 \let\udesc\textturnh
 21697 \let\hookh\texthth
 21698 \let\voicedh\texthth
 21699 \let\hookheng\texththeng
 21700 \let\ibar\textbari
 21701 \let\vari\textniota
 21702 \let\tildel\textltilde
 21703 \let\latfric\textbeltl
 21704 \let\tail\textrtail
 21705 \let\lz\textlyoghlig
 21706 \let\invm\textturnm
 21707 \let\rotm\textturnm
 21708 \let\legm\textturnmrleg
 21709 \let\labdentals\textltailm
 21710 \let\emgma\textltailm
 21711 \let\nj\textltailn
 21712 \let\enya\textltailn

21713 \let\tailn\textrtailn
 21714 \let\closedniomega\textcloseomega
 21715 \let\varomega\textcloseomega
 21716 \let\invr\textturnr
 21717 \let\rotr\textturnr
 21718 \let\invlegr\textturnlonglegr
 21719 \let\tailinvr\textturnrrtail
 21720 \let\legr\textlonglegr
 21721 \let\tailr\textrtailr
 21722 \let\flapr\textfishhookr
 21723 \let\flap\textfishhookr
 21724 \let\tails\textrtails
 21725 \let\curlyesh\textctesh
 21726 \let\clickt\textturnt
 21727 \let\tailt\textrtailt
 21728 \let\ubar\textbaru
 21729 \let\rotOmega\textniupsilon
 21730 \let\invv\textturnv
 21731 \let\pwedge\textturnv
 21732 \let\invw\textturnw
 21733 \let\rotw\textturnw
 21734 \let\invy\textturny
 21735 \let\roty\textturny
 21736 \let\tailz\textrtailz
 21737 \let\curlyz\textctz
 21738 \let\curlyyogh\textctyogh
 21739 \let\ejective\textglotstop
 21740 \let\glottal\textglotstop
 21741 \let\reveject\textrevglotstop
 21742 \let\clickc\textstretchc
 21743 \let\textstretchcvar\textstretchc
 21744 \let\clickb\textbullseye
 21745 \let\textObullseye\textbullseye
 21746 \let\textctjvar\textctj
 21747 \let\textturnsck\textturnk
 21748 \let\dz\textdzlig
 21749 \let\tesh\textteshlig
 21750 \let\digamma\textdigammagreek
 21751 \let\hardsign\cyrhrdsn
 21752 \let\softsign\cyrsoftsn
 21753 \let\hebsin\hebshin
 21754 \let\textsck\textPUscck
 21755 \let\textscm\textPUscm
 21756 \let\textscp\textPUscp
 21757 \let\textrevscr\textPUrevscr
 21758 \let\textrhooka\textPURhooka
 21759 \let\textrhooke\textPURhooke
 21760 \let\textrhookepsilon\textPURhookepsilon
 21761 \let\textrhoookopeno\textPURhookopeno
 21762 \let\textdoublevertline\textbardbl
 21763 \let\dag\textdagger
 21764 \let\ddagger\textdaggerdbl
 21765 \let\ddag\textdaggerdbl
 21766 \let\mathellipsis\textellipsis
 21767 \let\EurDig\texteuro
 21768 \let\EURdig\texteuro
 21769 \let\EurHv\texteuro

21770 \let\EURhv\texteuro
 21771 \let\EurCr\texteuro
 21772 \let\EURcr\texteuro
 21773 \let\EurTm\texteuro
 21774 \let\EURtm\texteuro
 21775 \let\Eur\texteuro
 21776 \let\Denarius\textDeleatur
 21777 \let\agemO\textmho
 21778 \let\EstimatedSign\textestimated
 21779 \let\Ecommerce\textestimated
 21780 \let\bindnasrepma\textinvamp
 21781 \let\parr\textinvamp
 21782 \let\MVRightArrow\textrightarrow
 21783 \let\MVRightarrow\textrightarrow
 21784 \let\MVArrowDown\textdownarrow
 21785 \let\Force\textdownarrow
 21786 \let\textglobrise\textnearrow
 21787 \let\textglobfall\textsearrow
 21788 \let\Lightning\textlightning
 21789 \let\Conclusion\textRightarrow
 21790 \let\dashedleftarrow\textdashleftarrow
 21791 \let\dashedrightarrow\textdashrightarrow
 21792 \let\varnothing\textemptyset
 21793 \let\owns\textni
 21794 \let\notni\textnotowner
 21795 \let\varprop\textpropto
 21796 \let\varangle\textsphericalangle
 21797 \let\Anglesign\textsphericalangle
 21798 \let\AngleSign\textsphericalangle
 21799 \let\notdivides\textnmid
 21800 \let\varowedge\textowedge
 21801 \let\varovee\textovee
 21802 \let\varint\textint
 21803 \let\varoint\textoint
 21804 \let\downtherefore\textbecause
 21805 \let\textdotdiv\textdotminus
 21806 \let\AC\textsim
 21807 \let\wreath\textwr
 21808 \let\nthickapprox\textnapprox
 21809 \let\VHF\texttriplesim
 21810 \let\notasymp\textnasyp
 21811 \let\Doteq\textdoteqdot
 21812 \let\corresponds\texthateq
 21813 \let\Corresponds\texthateq
 21814 \let\nequal\textneq
 21815 \let\Congruent\textequiv
 21816 \let\NotCongruent\textnequiv
 21817 \let\notequiv\textnequiv
 21818 \let\LessOrEqual\textleq
 21819 \let\LargerOrEqual\textgeq
 21820 \let\apprle\textlesssim
 21821 \let\apprge\textgtrsim
 21822 \let\varoplus\textoplus
 21823 \let\varominus\textominus
 21824 \let\varotimes\textotimes
 21825 \let\varoslash\textoslash
 21826 \let\varodot\textodot

21827 \let\ocirc\textcircledcirc
 21828 \let\varocircle\textcircledcirc
 21829 \let\varoast\textcircledast
 21830 \let\oasterisk\textcircledast
 21831 \let\rightvdash\textvdash
 21832 \let\leftvdash\textdashv
 21833 \let\leftvdash\textndashv
 21834 \let\downvdash\texttop
 21835 \let\upvdash\textbot
 21836 \let\nperp\textnupvdash
 21837 \let\models\textvDash
 21838 \let\rightmodels\textvDash
 21839 \let\rightVdash\textVdash
 21840 \let\rightModels\textVDash
 21841 \let\rightvdash\textnvdash
 21842 \let\rightmodels\textnvDash
 21843 \let\nmodels\textnvDash
 21844 \let\rightVdash\textnVdash
 21845 \let\rightModels\textnVDash
 21846 \let\lessclosed\textlhd
 21847 \let\gtrclosed\textrhd
 21848 \let\leqclosed\textunlhd
 21849 \let\trianglelefteq\textunlhd
 21850 \let\geqclosed\textunrhd
 21851 \let\trianglerighteq\textunrhd
 21852 \let\Bowtie\textbowtie
 21853 \let\varcurlyvee\textcurlyvee
 21854 \let\varcurlywedge\textcurlywedge
 21855 \let\doublecap\textCap
 21856 \let\doublecup\textCup
 21857 \let\varsqsubsetneq\textsqsubsetneq
 21858 \let\varsqsupsetneq\textsqsupsetneq
 21859 \let\lessclosed\textntriangleleft
 21860 \let\ngtrclosed\textntriangleright
 21861 \let\Clocklogo\textclock
 21862 \let\ClockLogo\textclock
 21863 \let\baro\textstmaryrdbaro
 21864 \let\varparallelinv\textbbslash
 21865 \let\CleaningA\textCircledA
 21866 \let\Kutline\textCuttingLine
 21867 \let\CutLine\textCuttingLine
 21868 \let\Cutline\textCuttingLine
 21869 \let\MoveUp\textUParrow
 21870 \let\APLup\textbigtriangleup
 21871 \let\Bleech\textbigtriangleup
 21872 \let\MoveDown\textDOWNarrow
 21873 \let\APLdown\textbigtriangledown
 21874 \let\Diamond\textdiamond
 21875 \let\varbigcirc\textbigcircle
 21876 \let\Telefon\textPhone
 21877 \let\Box\textboxempty
 21878 \let\CheckedBox\textCheckedbox
 21879 \let\XBox\textCrossedbox
 21880 \let\CrossedBox\textCrossedbox
 21881 \let\rightpointleft\textHandLeft
 21882 \let\leftpointright\textHandRight
 21883 \let\PointingHand\textHandRight

21884 \let\Pointinghand\textHandRight
 21885 \let\Radiation\textRadioactivity
 21886 \let\Yinyang\textYinYang
 21887 \let\YingYang\textYinYang
 21888 \let\Yingyang\textYinYang
 21889 \let\Frowny\textfrownie
 21890 \let\Smiley\textsmiley
 21891 \let\Sun\textsun
 21892 \let\Mercury\textmercury
 21893 \let\textfemale\textPUfemale
 21894 \let\female\textPUfemale
 21895 \let\venus\textPUfemale
 21896 \let\Venus\textPUfemale
 21897 \let\Female\textPUfemale
 21898 \let\Earth\textearth
 21899 \let\mars\textmale
 21900 \let\Mars\textmale
 21901 \let\Male\textmale
 21902 \let\Jupiter\textjupiter
 21903 \let\Saturn\textsaturn
 21904 \let\Uranus\texturanus
 21905 \let\Neptune\textneptune
 21906 \let\Pluto\textpluto
 21907 \let\Aries\textaries
 21908 \let\Taurus\texttaurus
 21909 \let\Gemini\textgemini
 21910 \let\Cancer\textcancer
 21911 \let\Leo\textleo
 21912 \let\Virgo\textvirgo
 21913 \let\Libra\textlibra
 21914 \let\Scorpio\textscorpio
 21915 \let\Sagittarius\textsagittarius
 21916 \let\Capricorn\textcapricornus
 21917 \let\Aquarius\textaquarius
 21918 \let\Pisces\textpisces
 21919 \let\spadesuit\textspadesuitblack
 21920 \let\Heart\textheartsuitwhite
 21921 \let\heartsuit\textheartsuitwhite
 21922 \let\diamondsuit\textdiamondsuitwhite
 21923 \let\clubsuit\textclubsuitblack
 21924 \let\ eighthnote\textmusicalnote
 21925 \let\Recycling\textrecycle
 21926 \let\VarFlag\textFlag
 21927 \let\textxswup\textds military
 21928 \let\textuncrfemale\textPUuncrfemale
 21929 \let\Football\textSoccerBall
 21930 \let\CutLeft\textScissorRightBrokenBottom
 21931 \let\Cutright\textScissorRightBrokenBottom
 21932 \let\RightScissors\textScissorRight
 21933 \let\Leftscissors\textScissorRight
 21934 \let\Letter\textEnvelope
 21935 \let\Writinghand\textWritingHand
 21936 \let\checkmark\textCheckmark
 21937 \let\ davidstar\textDavidStar
 21938 \let\llbracket\textlbrackdbl
 21939 \let\rrbracket\textrrbrackdbl
 21940 \let\RightTorque\textlcurvearrowdown

```

21941 \let\Righttorque\textlcurvearrowdown
21942 \let\LeftTorque\textrcurvearrowdown
21943 \let\Lefttorque\textrcurvearrowdown
21944 \let\textvarobar\textobar
21945 \let\circledbslash\textobslash
21946 \let\obackslash\textobslash
21947 \let\varobslash\textobslash
21948 \let\odplus\textobot
21949 \let\varolessthan\textolessthan
21950 \let\varogreaterthan\textogreaterthan
21951 \let\divdot\textminusdot
21952 \let\doublesqcap\textsquaddoublecap
21953 \let\doublesqcup\textsquaddoublecup
21954 \let\merge\textdoublevee
21955 \let\leftVdash\textdashV
21956 \let\leftVdash\textndashV
21957 \let\leftmodels\textDashv
21958 \let\leftmodels\textnDashv
21959 \let\leftModels\textDashV
21960 \let\leftModels\textnDashV
21961 \let\varparallel\textsslash
21962 \let\textheng\textPUheng
21963 \let\textlhookfour\textPUlhookfour
21964 \let\textscf\textPUscf
21965 \let\textaoilig\textPUailig
21966 \let\Ganz\textfullnote
21967 \let\Halb\texthalfnote
21968 \let\Womanface\textWomanFace
21969 \let\Faxmachine\textFax
21970 \let\CEsign\textCESign
21971 }% \psdaliasnames
21972 </psdextra>

```

52 End of file hyccheck.tex

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21973 <*check>
21974 \typeout{}
21975 \begin{document}
21976 \end{document}
21977 </check>

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53 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

| Symbols | | | |
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