

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' ffmtversion}{
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               \cename 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@pdffitwindow
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@implittrue
459 \Hy@linktopagefalse
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 }%
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 \TeX logo does not work while writing to a file, the standard \TeX logos are redefined.

```

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

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

```

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 \TeX 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` with `\let` is a little bit faster than `\providecommand`.

```

\pdfstringdefPostHook
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\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@hypertexnamesfalse
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}{hypertextnames}[true]{%
2960   \Hy@boolkey{hypertextnames}{#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{vtexpdfmark}{%
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`,


```

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{D\`J\`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}{pdflinkmargin}{\setpdflinkmargin{#1}}
4256 \let\setpdflinkmargin\@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}{pdfwindow}[true]{%
4345   \Hy@boolkey{pdfwindow}{#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 dvi pdfmx 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@DvipdfmxOutlineOpenttrue
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@DvipdfmxOutlineOpenttrue
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@activetrue
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@activetrue
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\\ \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@activetrue
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{##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@filesw
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 \ifx\MaybeStopEarly\relax
7223 \else
7224 \Hy@stoppedearlytrue
7225 \expandafter\MaybeStopEarly
7226 \fi
7227 \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 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
7593 \@ifpackageloaded{varioref}{%
7594   \def\vref@pagenum#1#2{%
7595     \@ifundefined{r@#2}{%
7596       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7597     }{}%
7598     \edef#1{\getpagerefnumber{#2}}%
7599   }%
7600 }{}

```

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

```

7601 \def\Hy@varioref@refstepcounter#1{%
7602   \stepcounter{#1}%
7603   \protected@edef\@currentlabel{%
7604     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7605   }%
7606 }
7607 \AtBeginDocument{%
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     \@makefnintext}%
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 \let\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]{}{cite.#1}{#2}}%
8423       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
8424       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{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     \@tempswatrue
8507     \@citedatax@opt
8508   }{%
8509     \@tempswafalse
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\c@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@filesw
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@activestru
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 \Hy@AtBeginDocument{%
9274   \@ifpackageloaded{varioref}{%
9275     \def\@Refstar#1{%
9276       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9277     }%
9278     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9279       \MakeUppercase#1%
9280     }%
9281     \DeclareRobustCommand*{\Ref}{%
9282       \@ifstar\@Refstar\HyRef@Ref
9283     }%
9284     \def\HyRef@Ref#1{%
9285       \hyperref[{#1}]{\Ref*{#1}}%
9286     }%
9287     \def\Vr@f#1{%
9288       \leavevmode\unskip\vref@space
9289       \hyperref[{#1}]{%
9290         \Ref*{#1}%
9291         \let\vref@space\nobreakspace
9292         \@vpageref[\unskip]{#1}%
9293       }%
9294     }%
9295     \def\vr@f#1{%
9296       \leavevmode\unskip\vref@space
9297       \begingroup
9298       \let\T@pageref\@pagerefstar
9299       \hyperref[{#1}]{%
9300         \ref*{#1}%

```



```

9301      \vpageref[\unskip]{#1}%
9302      }%
9303      \endgroup
9304      }%
9305      }{}%
9306  }
9307  \DeclareRobustCommand*{\autopageref}{%
9308    \ifstar{%
9309      \HyRef@autopagerefname\pageref*%
9310    }\HyRef@autopageref
9311  }
9312  \def\HyRef@autopageref#1{%
9313    \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9314  }
9315  \def\HyRef@autopagerefname{%
9316    \ltx@ifundefined{pageautorefname}{%
9317      \ltx@ifundefined{pagename}{%
9318        \Hy@Warning{No autoref name for `page'}%
9319      }{%
9320        \pagename\nobreakspace
9321      }%
9322    }{%
9323      \pageautorefname\nobreakspace
9324    }%
9325  }

```

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

```

9326  \DeclareRobustCommand*{\autoref}{%
9327    \leavevmode
9328    \ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@@link}%
9329  }
9330  \def\HyRef@autoref#1#2{%
9331    \begingroup
9332      \Hy@safe@activetrue
9333      \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9334    \endgroup
9335  }
9336  \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9337    \HyRef@ShowKeysRef{#2}%
9338    \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9339    \edef\HyRef@thisref{%
9340      \expandafter\@fourthoffive#1\@empty\@empty\@empty
9341    }%
9342    \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9343    \Hy@safe@activesfalse
9344    #3{%
9345      \expandafter\@fifthoffive#1\@empty\@empty\@empty
9346    }{%
9347      \expandafter\@fourthoffive#1\@empty\@empty\@empty
9348    }{%
9349      \HyRef@currentHtag
9350      \expandafter\@firstoffive#1\@empty\@empty\@empty
9351      \null
9352    }%
9353  }
9354  \protect\G@refundefinedtrue
9355  \nfss@text{\reset@font\bfseries ??}%

```

```

9356 \latex@warning{%
9357   Reference `#2' on page \thepage\space undefined%
9358 }%
9359 \fi
9360 }
9361 \def\HyRef@testreftype#1.#2\{\%
9362 \ltx@ifundefined{#1autorefname}\%
9363 \ltx@ifundefined{#1name}\%
9364 \HyRef@StripStar#1\*\@nil{#1}%
9365 \ltx@ifundefined{\HyRef@name autorefname}\%
9366 \ltx@ifundefined{\HyRef@name name}\%
9367 \def\HyRef@currentHtag{%
9368 \Hy@Warning{No autoref name for `#1'}%
9369 }{%
9370 \edef\HyRef@currentHtag{%
9371 \expandafter\noexpand\csname\HyRef@name name\endcsname
9372 \noexpand~%
9373 }%
9374 }%
9375 }{%
9376 \edef\HyRef@currentHtag{%
9377 \expandafter\noexpand
9378 \csname\HyRef@name autorefname\endcsname
9379 \noexpand~%
9380 }%
9381 }%
9382 }{%
9383 \edef\HyRef@currentHtag{%
9384 \expandafter\noexpand\csname#1name\endcsname
9385 \noexpand~%
9386 }%
9387 }%
9388 }{%
9389 \edef\HyRef@currentHtag{%
9390 \expandafter\noexpand\csname#1autorefname\endcsname
9391 \noexpand~%
9392 }%
9393 }%
9394 }
9395 \def\HyRef@StripStar#1*\#2\@nil#3{%
9396 \def\HyRef@name{#2}%
9397 \ifx\HyRef@name\HyRef@CaseStar
9398 \def\HyRef@name{#1}%
9399 \else
9400 \def\HyRef@name{#3}%
9401 \fi
9402 }
9403 \def\HyRef@CaseStar{*\\}
9404 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

9405 \let\HyRef@ShowKeysRef\@gobble
9406 \def\HyRef@ShowKeysInit{%
9407 \begingroup\expandafter\expandafter\expandafter\endgroup
9408 \expandafter\ifx\csname SK@@label\endcsname\relax
9409 \else

```

```

9410 \ifx\SK@ref\@empty
9411 \else
9412 \def\HyRef@ShowKeysRef{%
9413 \SK@\SK@\@ref
9414 }%
9415 \fi
9416 \fi
9417 }
9418 \@ifpackageloaded{showkeys}{%
9419 \HyRef@ShowKeysInit
9420 }{%
9421 \Hy@AtBeginDocument{%
9422 \@ifpackageloaded{showkeys}{%
9423 \HyRef@ShowKeysInit
9424 }{}%
9425 }%
9426 }

```

Defaults for the names that `\autoref` uses.

```

9427 \providecommand*\AMSautorefname{\equationautorefname}
9428 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9429 \providecommand*\Itemautorefname{\itemautorefname}
9430 \providecommand*\itemautorefname{item}
9431 \providecommand*\equationautorefname{Equation}
9432 \providecommand*\footnoteautorefname{footnote}
9433 \providecommand*\itemautorefname{item}
9434 \providecommand*\figureautorefname{Figure}
9435 \providecommand*\tableautorefname{Table}
9436 \providecommand*\partautorefname{Part}
9437 \providecommand*\appendixautorefname{Appendix}
9438 \providecommand*\chapterautorefname{chapter}
9439 \providecommand*\sectionautorefname{section}
9440 \providecommand*\subsectionautorefname{subsection}
9441 \providecommand*\subsubsectionautorefname{subsubsection}
9442 \providecommand*\paragraphautorefname{paragraph}
9443 \providecommand*\subparagraphautorefname{subparagraph}
9444 \providecommand*\FancyVerbLineautorefname{line}
9445 \providecommand*\theoremautorefname{Theorem}
9446 \providecommand*\pageautorefname{page}
9447 \</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 pdf_TEX offers `\pdfescapestring`.

```

9448 \<{*pdfTex | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo}
9449 \begingroup\expandafter\expandafter\expandafter\endgroup
9450 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9451 \begingroup

```

```

9452 \catcode`\|=0 %
9453 \@makeother\|%
9454 |@firstofone{|endgroup
9455 |def|Hy@pstringdef#1#2{%
9456 |begingroup
9457 |edef~{|string~}%
9458 |xdef|Hy@gtemp{#2}%
9459 |endgroup
9460 |let#1|Hy@gtemp
9461 |@onelevel@sanitize#1%
9462 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
9463 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1|@nil}%
9464 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1|@nil}%
9465 }%
9466 |def|Hy@ExchangeBackslash#1\#2|@nil{%
9467 #1%
9468 |ifx|\#2|\%%
9469 |else
9470 \\\%
9471 |ltx@ReturnAfterFi{%
9472 |Hy@ExchangeBackslash#2|@nil
9473 }%
9474 |fi
9475 }%
9476 }%
9477 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9478 #1%
9479 \ifx\#2\%%
9480 \else
9481 \@backslashchar(%
9482 \ltx@ReturnAfterFi{%
9483 \Hy@ExchangeLeftParenthesis#2\@nil
9484 }%
9485 \fi
9486 }%
9487 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9488 #1%
9489 \ifx\#2\%%
9490 \else
9491 \@backslashchar)%
9492 \ltx@ReturnAfterFi{%
9493 \Hy@ExchangeRightParenthesis#2\@nil
9494 }%
9495 \fi
9496 }%
9497 \else
9498 \def\Hy@pstringdef#1#2{%
9499 \begingroup
9500 \edef~{\string~}%
9501 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9502 \endgroup
9503 \let#1\Hy@gtemp
9504 }%
9505 \fi
9506 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdftex

```
9507 \providecommand*\XR@ext}{pdf}
9508 \Hy@setbreaklinks{true}
9509 \def\HyPat@ObjRef{%
9510   [0-9]*[1-9][0-9]* 0 R%
9511 }
9512 }
```

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

```
9513 \let\Hy@pdfminorversion\relax
9514 \begingroup\expandafter\expandafter\expandafter\endgroup
9515 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9516 \begingroup\expandafter\expandafter\expandafter\endgroup
9517 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9518 \else
9519 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9520 \fi
9521 \else
9522 \def\Hy@pdfminorversion{\pdfminorversion}%
9523 \fi
9524 \@ifundefined{Hy@pdfminorversion}{%
9525 \PackageInfo{hyperref}{%
9526   PDF version is not set, because pdfTeX is too old (<1.10a)%
9527 }%
9528 }{%
9529 \ifHy@ocgcolorlinks
9530 \ifnum\Hy@pdfminorversion<5 %
9531 \kvsetkeys{Hyp}{pdfversion=1.5}%
9532 \fi
9533 \fi
9534 \ifHy@setpdfversion
9535 \ifnum\Hy@pdfversion<5 %
9536 \ltx@ifundefined{pdfobjcompresslevel}{%
9537 }{%
9538 \ifHy@verbose
9539 \Hy@InfoNoLine{%
9540   PDF object streams are disabled, because they are%
9541   \MessageBreak
9542   not supported in requested PDF version %
9543   1.\Hy@pdfversion
9544 }%
9545 \fi
9546 \pdfobjcompresslevel=\ltx@zero
9547 }%
9548 \fi
9549 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9550 \else
9551 \let\Hy@temp\ltx@empty
9552 \def\Hy@temp@A#1#2{%
9553 \ifnum#1>\ltx@zero
9554 \edef\Hy@temp{%
```

```

9555     \Hy@temp
9556     \space\space
9557     \the#1\space #2%
9558     \ifnum#1=\ltx@one\else s\fi
9559     \MessageBreak
9560 }%
9561 \fi
9562 }%
9563 \Hy@temp@A\pdflastobj{PDF object}%
9564 \Hy@temp@A\pdflastxform{formXObject}%
9565 \Hy@temp@A\pdflastximage{imageXObject}%
9566 \Hy@temp@A\pdflastannot{annotation}%
9567 \ltx@ifundefined{pdflastlink}{%
9568 }{%
9569     \Hy@temp@A\pdflastlink{link}%
9570 }%
9571 \ifx\Hy@temp\ltx@empty
9572     \Hy@pdfminorversion=\Hy@pdfversion\relax
9573 \else
9574     \let\Hy@temp@A\ltx@empty
9575     \ifnum\Hy@pdfversion=4 %
9576         \IfFileExists{pdf14.sty}{%
9577             \def\Hy@temp@A{%
9578                 \MessageBreak
9579                 Or \string\RequirePackage{pdf14} can be used%
9580                 \MessageBreak
9581                 before \string\documentclass\space as shortcut%
9582             }%
9583         }{}%
9584     \fi
9585     \Hy@WarningNoLine{%
9586         The PDF version number could not be set,\MessageBreak
9587         because some PDF objects are already written:%
9588         \MessageBreak
9589         \Hy@temp
9590         The version should be set as early as possible:%
9591         \MessageBreak
9592         \space\space
9593         \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9594         \string\relax
9595         \ifnum\Hy@pdfversion<5 %
9596             \ltx@ifundefined{pdfobjcompresslevel}{%
9597                 }{%
9598                     \MessageBreak
9599                     \space\space
9600                     \string\pdfobjcompresslevel=0\string\relax
9601                 }%
9602             \fi
9603             \Hy@temp@A
9604         }%
9605     \fi
9606 \fi
9607 \PackageInfo{hyperref}{%
9608     \expandafter\string\Hy@pdfminorversion
9609     :=\number\Hy@pdfversion\space
9610 }%
9611 \fi

```

```

9612 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9613 }
9614 \Hy@DisableOption{pdfversion}%

9615 \ifHy@ocgcolorlinks
9616 \pdf@ifdraftmode{}{%
9617 \immediate\pdfobj{%
9618 <<%
9619 /Type/OCG%
9620 /Name(View)%
9621 /Usage<<%
9622 /Print<<%
9623 /PrintState/OFF%
9624 >>%
9625 /View<<%
9626 /ViewState/ON%
9627 >>%
9628 >>%
9629 >>%
9630 }%
9631 \edef\OBJ@OCG@view{\the\pdfastobj\space 0 R}%
9632 \immediate\pdfobj{%
9633 <<%
9634 /Type/OCG%
9635 /Name(Print)%
9636 /Usage<<%
9637 /Print<<%
9638 /PrintState/ON%
9639 >>%
9640 /View<<%
9641 /ViewState/OFF%
9642 >>%
9643 >>%
9644 >>%
9645 }%
9646 \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
9647 \immediate\pdfobj{%
9648 [%
9649 \OBJ@OCG@view\space\OBJ@OCG@print
9650 ]%
9651 }%
9652 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
9653 \pdfcatalog{%
9654 /OCProperties<<%
9655 /OCGs \OBJ@OCGs
9656 /D<<%
9657 /OFF[\OBJ@OCG@print]%
9658 /AS[%
9659 <<%
9660 /Event/View%
9661 /OCGs \OBJ@OCGs
9662 /Category[/View]%
9663 >>%
9664 <<%
9665 /Event/Print%
9666 /OCGs \OBJ@OCGs
9667 /Category[/Print]%
9668 >>%

```

```

9669      <<%
9670      /Event/Export%
9671      /OCGs \OBJ@OCGs
9672      /Category[/Print]%
9673      >>%
9674      ]%
9675      >>%
9676      >>%
9677      }%
9678      \begingroup
9679      \edef\x{\endgroup
9680      \pdfpageresources{%
9681      \the\pdfpageresources
9682      /Properties<<%
9683      /OCView \OBJ@OCG@view
9684      /OCPrint \OBJ@OCG@print
9685      >>%
9686      }%
9687      }%
9688      \x
9689      }%
9690      \Hy@AtBeginDocument{%
9691      \def\Hy@colorlink#1{%
9692      \begingroup
9693      \ifHy@ocgcolorlinks
9694      \def\Hy@ocgcolor{#1}%
9695      \setbox0=\hbox\bgroup\color@begingroup
9696      \else
9697      \HyColor@UseColor#1%
9698      \fi
9699      }%
9700      \def\Hy@endcolorlink{%
9701      \ifHy@ocgcolorlinks
9702      \color@endgroup\egroup
9703      \mbox{%
9704      \pdfliteral page{/OC/OCPrint BDC}%
9705      \rlap{\copy0}%
9706      \pdfliteral page{EMC/OC/OCView BDC}%
9707      \begingroup
9708      \expandafter\HyColor@UseColor\Hy@ocgcolor
9709      \box0 %
9710      \endgroup
9711      \pdfliteral page{EMC}%
9712      }%
9713      \fi
9714      \endgroup
9715      }%
9716      }%
9717      \else
9718      \Hy@DisableOption{ocgcolorlinks}%
9719      \fi

```

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

```

9720 \def\setpdfinkmargin#1{%
9721 \begingroup
9722 \setlength{\dimen@}{#1}%
9723 \expandafter\endgroup
9724 \expandafter\pdfinkmargin\the\dimen@\relax

```



```

9725 }
9726 \ifx\pdfstartlink\@undefined% less than version 14
9727 \let\pdfstartlink\pdfannotlink
9728 \let\pdfinkmargin\@tempdima
9729 \let\pdfxform\pdfform
9730 \let\pdfastxform\pdfastform
9731 \let\pdfrefxform\pdfrefform
9732 \else
9733 \pdfinkmargin1pt %
9734 \fi

```

First set up the default linking

```

9735 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9736 \Hy@WrapperDef\new@pdfink#1{%
9737 \ifhmode
9738 \savsf\spacefactor
9739 \fi
9740 \Hy@SaveLastskip
9741 \Hy@VerboseAnchor{#1}%
9742 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9743 \Hy@DestName\Hy@pstringDest\@pdfview
9744 \Hy@RestoreLastskip
9745 \ifhmode
9746 \spacefactor\@savsf
9747 \fi
9748 }
9749 \let\pdf@endanchor\@empty

```

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

```

9750 \def\Hy@DestName#1#2{%
9751 \pdfdest name{#1}#2\relax
9752 }

```

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.

```

9753 \providecommand*\@pdfborder{0 0 1}
9754 \providecommand*\@pdfborderstyle{}
9755 \def\Hy@undefinedname{UNDEFINED}
9756 \def\find@pdfink#1#2{%
9757 \leavevmode
9758 \protected@edef\Hy@testname{#2}%
9759 \ifx\Hy@testname\@empty
9760 \Hy@Warning{%
9761 Empty destination name,\MessageBreak
9762 using '\Hy@undefinedname'%
9763 }%
9764 \let\Hy@testname\Hy@undefinedname
9765 \else
9766 \Hy@pstringdef\Hy@testname{%
9767 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9768 }%
9769 \fi
9770 \Hy@StartlinkName{%

```

```

9771 \ifHy@pdfa /F 4\fi
9772 \Hy@setpdfborder
9773 \Hy@setpdfhighlight
9774 \ifx\CurrentBorderColor\relax
9775 \else
9776 /C[\CurrentBorderColor]%
9777 \fi
9778 }\Hy@testname
9779 \expandafter\Hy@colorlink\csname @#1color\endcsname
9780 }
9781 \def\Hy@StartlinkName#1#2{%
9782 \pdfstartlink attr{#1}goto name{#2}\relax
9783 }
9784 \def\close@pdfink{%
9785 \Hy@endcolorlink
9786 \Hy@VerboseLinkStop
9787 \pdfendlink
9788 }
9789 \def\hyper@anchor#1{%
9790 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9791 }
9792 \def\hyper@anchorstart#1{%
9793 \new@pdfink{#1}%
9794 \Hy@activeanchortrue
9795 }
9796 \def\hyper@anchorend{%
9797 \pdf@endanchor
9798 \Hy@activeanchorfalse
9799 }
9800 \def\hyper@linkstart#1#2{%
9801 \Hy@VerboseLinkStart{#1}{#2}%
9802 \ltx@ifundefined{@#1bordercolor}{%
9803 \let\CurrentBorderColor\relax
9804 }{%
9805 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9806 }%
9807 \find@pdfink{#1}{#2}%
9808 }
9809 \def\hyper@linkend{\close@pdfink}
9810 \def\hyper@link#1#2#3{%
9811 \Hy@VerboseLinkStart{#1}{#2}%
9812 \ltx@ifundefined{@#1bordercolor}{%
9813 \let\CurrentBorderColor\relax
9814 }{%
9815 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9816 }%
9817 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9818 \close@pdfink
9819 }
9820 \let\CurrentBorderColor\@linkbordercolor
9821 \def\hyper@linkurl#1#2{%
9822 \begingroup
9823 \Hy@pstringdef\Hy@pstringURI{#2}%
9824 \hyper@chars
9825 \leavevmode
9826 \pdfstartlink
9827 attr{%

```

```

9828     \Hy@setpdfborder
9829     \Hy@setpdfhighlight
9830     \ifx\@urlbordercolor\relax
9831     \else
9832     /C[\@urlbordercolor]%
9833     \fi
9834 }%
9835 user{%
9836 /Subtype/Link%
9837 \ifHy@pdfa /F 4\fi
9838 /A<<%
9839 /Type/Action%
9840 /S/URI%
9841 /URI(\Hy@pstringURI)%
9842 \ifHy@href@ismap
9843 /IsMap true%
9844 \fi
9845 \Hy@href@nextactionraw
9846 >>%
9847 }%
9848 \relax
9849 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9850 \close@pdflink
9851 \endgroup
9852 }
9853 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9854 \begingroup
9855 \def\Hy@pstringF{#2}%
9856 \Hy@CleanupFile\Hy@pstringF
9857 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9858 \Hy@pstringdef\Hy@pstringD{#3}%
9859 \Hy@MakeRemoteAction
9860 \leavevmode
9861 \pdfstartlink
9862 attr{%
9863     \Hy@setpdfborder
9864     \Hy@setpdfhighlight
9865     \ifx\@filebordercolor\relax
9866     \else
9867     /C[\@filebordercolor]%
9868     \fi
9869 }%
9870 user {%
9871 /Subtype/Link%
9872 \ifHy@pdfa /F 4\fi
9873 /A<<%
9874 /F(\Hy@pstringF)%
9875 /S/GoToR%
9876 \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}

9877     \ifx\|#3\|%
9878         /D[\Hy@href@page\@pdfremotestartview]%
9879     \else
9880         /D(\Hy@pstringD)%
9881     \fi
9882     \Hy@href@nextactionraw
9883     >>%
9884 }%
9885 \relax
9886 \Hy@colorlink\@filecolor#1\Hy@xspace@end
9887 \close@pdflink
9888 \endgroup
9889 }
9890 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
9891 \begingroup
9892 \Hy@pstringdef\Hy@pstringF{#1}%
9893 \Hy@pstringdef\Hy@pstringP{#3}%
9894 \leavevmode
9895 \pdfstartlink
9896 attr{%
9897     \Hy@setpdfborder
9898     \Hy@setpdfhighlight
9899     \ifx\@runbordercolor\relax
9900     \else
9901         /C[\@runbordercolor]%
9902     \fi
9903 }%
9904 user {%
9905     /Subtype/Link%
9906     \ifHy@pdfa /F 4\fi
9907     /A<<%
9908         /F(\Hy@pstringF)%
9909         /S/Launch%
9910         \Hy@SetNewWindow
9911         \ifx\|#3\|%
9912         \else
9913             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9914         \fi
9915         \Hy@href@nextactionraw
9916     >>%
9917 }%
9918 \relax
9919 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9920 \close@pdflink
9921 \endgroup
9922 }

```

\PDF@SetupDox

```

9923 \def\PDF@SetupDoc{%
9924 \ifx\@pdfpagescrop\@empty
9925 \else
9926 \edef\process@me{%
9927     \pdfpagesattr={%
9928         /CropBox[\@pdfpagescrop]%

```

```

9929     \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
9930     \else
9931         ^^J\the\pdfpagesattr
9932     \fi
9933 }%
9934 }%
9935 \process@me
9936 \fi
9937 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9938 \pdfcatalog{%
9939     /PageMode/\@pdfpagemode
9940     \ifx\@baseurl\@empty
9941     \else
9942         /URI<</Base(\Hy@pstringB)>>%
9943     \fi
9944 }%
9945 \ifx\@pdfstartpage\@empty
9946 \else
9947     \ifx\@pdfstartview\@empty
9948     \else
9949         openaction goto page\@pdfstartpage{\@pdfstartview}%
9950     \fi
9951 \fi
9952 \edef\Hy@temp{%
9953     \ifHy@pdftoolbar\else /HideToolbar true\fi
9954     \ifHy@pdfmenubar\else /HideMenubar true\fi
9955     \ifHy@pdfwindowui\else /HideWindowUI true\fi
9956     \ifHy@pdffitwindow /FitWindow true\fi
9957     \ifHy@pdfcenterwindow /CenterWindow true\fi
9958     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9959     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9960     \Hy@UseNameKey{Direction}\@pdfdirection
9961     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9962     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9963     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9964     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9965     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9966     \Hy@UseNameKey{Duplex}\@pdfduplex
9967     \ifx\@pdfpicktraybypdfsize\@empty
9968     \else
9969         /PickTrayByPDFSize \@pdfpicktraybypdfsize
9970     \fi
9971     \ifx\@pdfprintpagerange\@empty
9972     \else
9973         /PrintPageRange[\@pdfprintpagerange]%
9974     \fi
9975     \ifx\@pdfnumcopies\@empty
9976     \else
9977         /NumCopies \@pdfnumcopies
9978     \fi
9979 }%
9980 \pdfcatalog{%
9981     \ifx\Hy@temp\@empty
9982     \else
9983         /ViewerPreferences<<\Hy@temp>>%
9984     \fi
9985     \Hy@UseNameKey{PageLayout}\@pdfpagelayout

```

```

9986 \ifx\@pdflang\relax
9987 \else
9988 /Lang(\@pdflang)%
9989 \fi
9990 }%
9991 }

```

\PDF@FinishDoc

```

9992 \def\PDF@FinishDoc{%
9993 \pdf@ifdraftmode{}{%
9994 \Hy@UseMaketitleInfos
9995 \HyInfo@GenerateAddons
9996 \pdfinfo{%
9997 /Author(\@pdfauthor)%
9998 /Title(\@pdftitle)%
9999 /Subject(\@pdfsubject)%
10000 /Creator(\@pdfcreator)%
10001 \ifx\@pdfcreationdate\@empty
10002 \else
10003 /CreationDate(\@pdfcreationdate)%
10004 \fi
10005 \ifx\@pdfmoddate\@empty
10006 \else
10007 /ModDate(\@pdfmoddate)%
10008 \fi
10009 \ifx\@pdfproducer\relax
10010 \else
10011 /Producer(\@pdfproducer)%
10012 \fi
10013 /Keywords(\@pdfkeywords)%
10014 \ifx\@pdftrapped\@empty
10015 \else
10016 /Trapped/\@pdftrapped
10017 \fi
10018 \HyInfo@Addons
10019 }%
10020 }%
10021 \Hy@DisableOption{pdfauthor}%
10022 \Hy@DisableOption{pdftitle}%
10023 \Hy@DisableOption{pdfsubject}%
10024 \Hy@DisableOption{pdfcreator}%
10025 \Hy@DisableOption{addtopdfcreator}%
10026 \Hy@DisableOption{pdfcreationdate}%
10027 \Hy@DisableOption{pdfmoddate}%
10028 \Hy@DisableOption{pdfproducer}%
10029 \Hy@DisableOption{pdfkeywords}%
10030 \Hy@DisableOption{pdftrapped}%
10031 \Hy@DisableOption{pdfinfo}%
10032 }

```

\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.

```

10033 \def\hyper@pagetransition{%
10034 \ifx\@pdfpagetransition\relax
10035 \else
10036 \expandafter\Hy@RemoveTransPageAttr

```

```

10037 \the\pdfpageattr^^J/Trans{}}>>\END
10038 \ifx\@pdfpagetransition\@empty
10039 \else
10040 \edef\@processme{%
10041 \global\pdfpageattr{%
10042 \the\pdfpageattr
10043 ^^J/Trans << /S /\@pdfpagetransition\space >>%
10044 }%
10045 }%
10046 \@processme
10047 \fi
10048 \fi
10049 }

```

\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.

```

10050 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10051 \ifx\#2\%
10052 \global\pdfpageattr{#1}%
10053 \else
10054 \Hy@RemoveTransPageAttr#1#4\END
10055 \fi
10056 }

```

\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`.

```

10057 \def\hyper@pageduration{%
10058 \ifx\@pdfpageduration\relax
10059 \else
10060 \expandafter
10061 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10062 \ifx\@pdfpageduration\@empty
10063 \else
10064 \edef\@processme{%
10065 \global\pdfpageattr{%
10066 \the\pdfpageattr
10067 ^^J/Dur \@pdfpageduration\space
10068 }%
10069 }%
10070 \@processme
10071 \fi
10072 \fi
10073 }

```

\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.

```

10074 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10075 \ifx\#2\%
10076 \global\pdfpageattr{#1}%
10077 \else

```

```

10078 \Hy@RemoveDurPageAttr#1#4\END
10079 \fi
10080 }

```

`\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).

```

10081 \def\hyper@pagehidden{%
10082 \ifHy@useHidKey
10083 \expandafter
10084 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
10085 \ifHy@pdfpagehidden
10086 \edef\@processme{%
10087 \global\pdfpageattr{%
10088 \the\pdfpageattr
10089 ^^J/Hid true % SPACE
10090 }%
10091 }%
10092 \@processme
10093 \fi
10094 \fi
10095 }

```

`\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.

```

10096 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10097 \ifx\#2\%
10098 \global\pdfpageattr{#1}%
10099 \else
10100 \Hy@RemoveHidPageAttr#1#4\END
10101 \fi
10102 }

10103 \pdf@ifdraftmode{}{%
10104 \g@addto@macro\Hy@EveryPageHook{%
10105 \hyper@pagetransition
10106 \hyper@pageduration
10107 \hyper@pagehidden
10108 }%
10109 }

```

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

```

10110 \pdfifx{pdf}
10111 \ifx\pdfifx{xetex}
10112 \Hy@AtBeginDocument{%
10113 \ifHy@setpagesize
10114 \expandafter\@firstofone
10115 \else
10116 \expandafter\@gobble
10117 \fi
10118 }%
10119 \ifclassloaded{seminar}{%
10120 \pdfifx{pdf}
10121 \setlength{\pdfhorigin}{1truein}%

```



```

10122 \setlength{\pdfvorigin}{1truein}%
10123 </pdftex>
10124 \ifportrait
10125 \ifdim\paperwidth=\z@
10126 \else
10127 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10128 \fi
10129 \ifdim\paperheight=\z@
10130 \else
10131 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10132 \fi
10133 \else
10134 \ifdim\paperheight=\z@
10135 \else
10136 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10137 \fi
10138 \ifdim\paperwidth=\z@
10139 \else
10140 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10141 \fi
10142 \fi
10143 }{%
10144 \ltx@ifundefined{stockwidth}{%
10145 \ifdim\paperwidth>\z@
10146 \setlength{\pdfpagewidth}{\paperwidth}%
10147 \fi
10148 \ifdim\paperheight>\z@
10149 \setlength{\pdfpageheight}{\paperheight}%
10150 \fi
10151 }{%
10152 \ifdim\stockwidth>\z@
10153 \setlength{\pdfpagewidth}{\stockwidth}%
10154 \fi
10155 \ifdim\stockheight>\z@
10156 \setlength{\pdfpageheight}{\stockheight}%
10157 \fi
10158 }%
10159 }%
10160 }%
10161 \Hy@DisableOption{setpagesize}%
10162 }
10163 </pdftex | xetex>
10164 <*pdftex>
10165 \def\Acrobatmenu#1#2{%
10166 \Hy@Acrobatmenu{#1}{#2}{%
10167 \leavevmode
10168 \EdefEscapeName\Hy@temp@menu{#1}%
10169 \pdfstartlink
10170 attr{%
10171 \Hy@setpdfborder
10172 \Hy@setpdfhighlight
10173 \ifx\@menubordercolor\relax
10174 \else
10175 /C[\@menubordercolor]%
10176 \fi
10177 }%
10178 user{%

```

```

10179      /Subtype/Link%
10180      \ifHy@pdfa /F 4\fi
10181      /A<<%
10182      /S/Named%
10183      /N/\Hy@temp@menu
10184      \Hy@href@nextactionraw
10185      >>%
10186      }%
10187      \relax
10188      \Hy@colorlink\@menucolor#2%
10189      \close@pdflink
10190      }%
10191      }

```

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.

```

10192 \def\Hy@FixNotFirstPage{%
10193   \gdef\Hy@FixNotFirstPage{%
10194     \setbox\AtBeginShipoutBox=\hbox{%
10195       \copy\AtBeginShipoutBox
10196     }%
10197   }%
10198 }
10199 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
10200 }{%
10201   \AtBeginShipout{\Hy@FixNotFirstPage}%
10202 }
10203 \</pdfTeX>

```

47.3 hypertext

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: html:

name: html:

end: html:

image: html:

base_name: html:<base href = "href_string">

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical

format on the page in the current location. The *base_name* command is 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.

```

10204 (*hypertex)
10205 \providecommand*\XR@ext}{dvi}
10206 \let\PDF@FinishDoc\ltx@empty
10207 \def\PDF@SetupDoc{%
10208   \ifx\@baseurl\@empty
10209     \else
10210       \special{html:<base href="\@baseurl">}%
10211     \fi
10212 }
10213 \Hy@WrapperDef\hyper@anchor#1{%
10214   \Hy@SaveLastskip
10215   \Hy@VerboseAnchor{#1}%
10216   \begingroup
10217     \let\protect=\string
10218     \hyper@chars
10219     \special{html:<a name=%
10220       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10221   \endgroup
10222   \Hy@activeanchortrue
10223   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10224   \special{html:</a>}%
10225   \Hy@activeanchorfalse
10226   \Hy@RestoreLastskip
10227 }
10228 \Hy@WrapperDef\hyper@anchorstart#1{%
10229   \Hy@SaveLastskip
10230   \Hy@VerboseAnchor{#1}%
10231   \begingroup
10232     \hyper@chars
10233     \special{html:<a name=%
10234       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10235   \endgroup
10236   \Hy@activeanchortrue
10237 }
10238 \def\hyper@anchorend{%
10239   \special{html:</a>}%
10240   \Hy@activeanchorfalse
10241   \Hy@RestoreLastskip
10242 }
10243 \def\@urltype{url}
10244 \def\hyper@linkstart#1#2{%

```

```

10245 \Hy@VerboseLinkStart{#1}{#2}%
10246 \expandafter\Hy@colorlink\csname @#1color\endcsname
10247 \def\Hy@tempa{#1}%
10248 \ifx\Hy@tempa\@urlltype
10249 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10250 \else
10251 \begingroup
10252 \hyper@chars
10253 \special{html:<a href=%
10254 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
10255 \endgroup
10256 \fi
10257 }
10258 \def\hyper@linkend{%
10259 \special{html:</a>}}%
10260 \Hy@endcolorlink
10261 }
10262 \def\hyper@linkfile#1#2#3{%
10263 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10264 }
10265 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why `LATEX` constructs make this totally foul up, and make us revert to basic `TEX`. I do not know.

```

10266 \leavevmode
10267 \ifHy@raiselinks
10268 \Hy@SaveSpaceFactor
10269 \Hy@SaveSavedSpaceFactor
10270 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10271 \Hy@RestoreSavedSpaceFactor
10272 \@linkdim\dp\@tempboxa
10273 \lower\@linkdim\hbox{%
10274 \hyper@chars
10275 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10276 }%
10277 \Hy@colorlink\@urlcolor
10278 \Hy@RestoreSpaceFactor
10279 #1%
10280 \Hy@SaveSpaceFactor
10281 \@linkdim\ht\@tempboxa

```

Because of the interaction with the `dvi` 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).

```

10282 \advance\@linkdim by -6.5\p@
10283 \raise\@linkdim\hbox{\special{html:</a>}}%
10284 \Hy@endcolorlink
10285 \Hy@RestoreSpaceFactor
10286 \else
10287 \begingroup
10288 \hyper@chars
10289 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10290 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10291 \special{html:</a>}}%
10292 \Hy@endcolorlink
10293 \endgroup
10294 \fi

```

```

10295 }
Very poor implementation of \hyper@link without considering #1.
10296 \def\hyper@link#1#2#3{%
10297   \Hy@VerboseLinkStart{#1}{#2}%
10298   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
10299 }

10300 \def\hyper@image#1#2{%
10301   \begingroup
10302     \hyper@chars
10303     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10304   \endgroup
10305 }
10306 </hypertex>
10307 <*dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to `\wwwbrowser` is made. (You can define this command before or after loading the hyperref package if the default `c:/netscape/netscape` is not suitable) Dviwindo could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertex cfg. For dviwindo, \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.

```

10308 \providecommand*\{XR@ext}{dvi}
10309 \providecommand\wwwbrowser{c:\string\netscape\string\netscape}
10310 \Hy@WrapperDef\hyper@anchor#1{%
10311   \Hy@SaveLastskip
10312   \Hy@VerboseAnchor{#1}%
10313   \begingroup
10314     \let\protect=\string
10315     \special{mark: #1}%
10316   \endgroup
10317   \Hy@activeanchortrue
10318   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10319   \Hy@activeanchorfalse
10320   \Hy@RestoreLastskip
10321 }
10322 \Hy@WrapperDef\hyper@anchorstart#1{%
10323   \Hy@SaveLastskip
10324   \Hy@VerboseAnchor{#1}%
10325   \special{mark: #1}%
10326   \Hy@activeanchortrue
10327 }
10328 \def\hyper@anchorend{%
10329   \Hy@activeanchorfalse
10330   \Hy@RestoreLastskip
10331 }
10332 \def\hyper@linkstart#1#2{%
10333   \Hy@VerboseLinkStart{#1}{#2}%
10334   \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

10335 \special{button: %
10336 10000000 %
10337 \number\baselineskip\space
10338 #2%
10339 }%
10340 }
10341 \def\hyper@linkend{%
10342 \Hy@endcolorlink
10343 }
10344 \def\hyper@link#1#2#3{%
10345 \Hy@VerboseLinkStart{#1}{#2}%
10346 \leavevmode
10347 \ifHy@raiselinks
10348 \Hy@SaveSpaceFactor
10349 \Hy@SaveSavedSpaceFactor
10350 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10351 \Hy@RestoreSavedSpaceFactor
10352 \@linkdim\dp\@tempboxa
10353 \lower\@linkdim\hbox{%
10354 \special{button: %
10355 \number\wd\@tempboxa\space
10356 \number\ht\@tempboxa\space
10357 #2%
10358 }%
10359 \expandafter\Hy@colorlink\csname @#1color\endcsname
10360 \Hy@RestoreSpaceFactor
10361 #3\Hy@xspace@end
10362 \Hy@SaveSpaceFactor
10363 \Hy@endcolorlink
10364 }%
10365 \@linkdim\ht\@tempboxa
10366 \advance\@linkdim by -6.5\p@
10367 \raise\@linkdim\hbox{}%
10368 \Hy@RestoreSpaceFactor
10369 \else
10370 \special{button: %
10371 \number\wd\@tempboxa\space
10372 \number\ht\@tempboxa\space
10373 #2%
10374 }%
10375 \expandafter\Hy@colorlink\csname @#1color\endcsname
10376 #3\Hy@xspace@end
10377 \Hy@endcolorlink
10378 \fi
10379 }
10380 \def\hyper@linkurl#1#2{%
10381 \begingroup
10382 \hyper@chars
10383 \leavevmode
10384 \ifHy@raiselinks
10385 \Hy@SaveSpaceFactor
10386 \Hy@SaveSavedSpaceFactor
10387 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10388 \Hy@RestoreSavedSpaceFactor
10389 \@linkdim\dp\@tempboxa
10390 \lower\@linkdim\hbox{%
10391 \special{button: %

```

```

10392      \number\wd\@tempboxa\space
10393      \number\ht\@tempboxa\space
10394      launch: \wwwbrowser\space
10395      #2%
10396  }%
10397  \Hy@colorlink\@urlcolor
10398  \Hy@RestoreSpaceFactor
10399  #1\Hy@xspace@end
10400  \Hy@SaveSpaceFactor
10401  \Hy@endcolorlink
10402  }%
10403  \@linkdim\ht\@tempboxa
10404  \advance\@linkdim by -6.5\p@
10405  \raise\@linkdim\hbox{}%
10406  \Hy@RestoreSpaceFactor
10407  \else
10408  \special{button: %
10409  \number\wd\@tempboxa\space
10410  \number\ht\@tempboxa\space
10411  launch: \wwwbrowser\space
10412  #2%
10413  }%
10414  \Hy@colorlink\@urlcolor
10415  #1\Hy@xspace@end
10416  \Hy@endcolorlink
10417  \fi
10418  \endgroup
10419  }
10420  \def\hyper@linkfile#1#2#3{%
10421  \begingroup
10422  \hyper@chars
10423  \leavevmode
10424  \ifHy@raiselinks
10425  \Hy@SaveSpaceFactor
10426  \Hy@SaveSavedSpaceFactor
10427  \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10428  \Hy@RestoreSavedSpaceFactor
10429  \@linkdim\dp\@tempboxa
10430  \lower\@linkdim\hbox{%
10431  \special{button: %
10432  \number\wd\@tempboxa\space
10433  \number\ht\@tempboxa\space
10434  #3,%
10435  file: #2%
10436  }%
10437  \Hy@colorlink\@filecolor
10438  \Hy@RestoreSpaceFactor
10439  #1\Hy@xspace@end
10440  \Hy@SaveSpaceFactor
10441  \Hy@endcolorlink
10442  }%
10443  \@linkdim\ht\@tempboxa
10444  \advance\@linkdim by -6.5\p@
10445  \raise\@linkdim\hbox{}%
10446  \Hy@RestoreSpaceFactor
10447  \else
10448  \special{button: %

```

```

10449     \number\wd\@tempboxa\space
10450     \number\ht\@tempboxa\space
10451     #3,%
10452     file: #2%
10453 }%
10454 \Hy@colorlink\@filecolor
10455 #1\Hy@xspace@end
10456 \Hy@endcolorlink
10457 \fi
10458 \endgroup
10459 }
10460 \HyInfo@AddonUnsupportedtrue
10461 \def\PDF@FinishDoc{%
10462   \Hy@UseMaketitleInfos
10463   \HyInfo@TrappedUnsupported
10464   \special{PDF: Keywords \@pdfkeywords}%
10465   \special{PDF: Title \@pdftitle}%
10466   \special{PDF: Creator \@pdfcreator}%
10467   \ifx\@pdfcreationdate\@empty
10468   \else
10469     \special{PDF: CreationDate \@pdfcreationdate}%
10470   \fi
10471   \ifx\@pdfmoddate\@empty
10472   \else
10473     \special{PDF: ModDate \@pdfmoddate}%
10474   \fi
10475   \special{PDF: Author \@pdfauthor}%
10476   \ifx\@pdfproducer\relax
10477   \else
10478     \special{PDF: Producer \@pdfproducer}%
10479   \fi
10480   \special{PDF: Subject \@pdfsubject}%
10481   \Hy@DisableOption{pdfauthor}%
10482   \Hy@DisableOption{pdftitle}%
10483   \Hy@DisableOption{pdfsubject}%
10484   \Hy@DisableOption{pdfcreator}%
10485   \Hy@DisableOption{addtopdfcreator}%
10486   \Hy@DisableOption{pdfcreationdate}%
10487   \Hy@DisableOption{pdfcreationdate}%
10488   \Hy@DisableOption{pdfmoddate}%
10489   \Hy@DisableOption{pdfproducer}%
10490   \Hy@DisableOption{pdfkeywords}%
10491   \Hy@DisableOption{pdftrapped}%
10492   \Hy@DisableOption{pdfinfo}%
10493 }
10494 \def\PDF@SetupDoc{%
10495   \ifx\@baseurl\@empty
10496   \else
10497     \special{PDF: Base \@baseurl}%
10498   \fi
10499   \ifx\@pdfpagescrop\@empty\else
10500     \special{PDF: BBox \@pdfpagescrop}%
10501   \fi
10502   \def\Hy@temp{}%
10503   \ifx\@pdfstartpage\@empty
10504   \else
10505     \ifx\@pdfstartview\@empty

```



```

10506 \else
10507 \edef\Hy@temp{%
10508 ,Page=\@pdfstartpage
10509 ,View=\@pdfstartview
10510 }%
10511 \fi
10512 \fi
10513 \edef\Hy@temp{%
10514 \noexpand\pdfmark{%
10515 pdfmark=/DOCVIEW,%
10516 PageMode=/\@pdfpagemode
10517 \Hy@temp
10518 }%
10519 }%
10520 \Hy@temp
10521 \ifx\@pdfpagescrop\@empty
10522 \else
10523 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10524 \fi
10525 \edef\Hy@temp{%
10526 \ifHy@pdftoolbar\else /HideToolbar true\fi
10527 \ifHy@pdfmenubar\else /HideMenubar true\fi
10528 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10529 \ifHy@pdffitwindow /FitWindow true\fi
10530 \ifHy@pdfcenterwindow /CenterWindow true\fi
10531 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10532 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10533 \Hy@UseNameKey{Direction}\@pdfdirection
10534 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10535 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10536 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10537 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10538 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10539 \Hy@UseNameKey{Duplex}\@pdfduplex
10540 \ifx\@pdfpicktraybypdfsize\@empty
10541 \else
10542 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10543 \fi
10544 \ifx\@pdfprintpagerange\@empty
10545 \else
10546 /PrintPageRange[\@pdfprintpagerange]%
10547 \fi
10548 \ifx\@pdfnumcopies\@empty
10549 \else
10550 /NumCopies \@pdfnumcopies
10551 \fi
10552 }%
10553 \pdfmark{pdfmark=/PUT,%
10554 Raw={%
10555 \string{Catalog\string}<<%
10556 \ifx\Hy@temp\@empty
10557 \else
10558 /ViewerPreferences<<\Hy@temp>>%
10559 \fi
10560 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10561 \ifx\@pdflang\relax
10562 \else

```

```

10563      /Lang(\@pdflang)%
10564      \fi
10565      >>%
10566    }%
10567  }%
10568 }
10569 </dviwindo>
10570 <{*dvipdfm | xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10571 \providecommand*\XR@ext}{pdf}
10572 \Hy@setbreaklinks{true}
10573 \def\HyPat@ObjRef{%
10574   @[\ ]+{%
10575 }
10576 \newsavebox{\pdfm@box}
10577 \def\@pdfm@mark#1{\special{pdf:#1}}
10578 \Hy@WrapperDef\@pdfm@dest#1{%
10579   \Hy@SaveLastskip
10580   \Hy@VerboseAnchor{#1}%
10581   \begingroup
10582     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10583     \def\x{XYZ}%
10584     \ifx\x\@pdfview
10585       \def\x{XYZ @xpos @ypos null}%
10586     \else
10587       \def\x{FitH}%
10588       \ifx\x\@pdfview
10589         \def\x{FitH @ypos}%
10590       \else
10591         \def\x{FitBH}%
10592         \ifx\x\@pdfview
10593           \def\x{FitBH @ypos}%
10594         \else
10595           \def\x{FitV}%
10596           \ifx\x\@pdfview
10597             \def\x{FitV @xpos}%
10598           \else
10599             \def\x{FitBV}%
10600             \ifx\x\@pdfview
10601               \def\x{FitBV @xpos}%
10602             \else
10603               \def\x{Fit}%
10604               \ifx\x\@pdfview
10605                 \let\x\@pdfview
10606               \else
10607                 \def\x{FitB}%
10608                 \ifx\x\@pdfview
10609                   \let\x\@pdfview
10610                 \else
10611                   \def\x{FitR}%
10612                   \ifx\x\@pdfview
10613                     \Hy@Warning{\`pdfview=FitR' is not supported}%
10614                     \def\x{XYZ @xpos @ypos null}%
10615                   \else

```

```

10616         \@onelevel@sanitize\@pdfview
10617         \Hy@Warning{%
10618             Unknown value `\'@pdfview' for pdfview%
10619         }%
10620         \def\x{XYZ @xpos @ypos null}%
10621     \fi
10622 \fi
10623 \fi
10624 \fi
10625 \fi
10626 \fi
10627 \fi
10628 \fi
10629 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10630 \endgroup
10631 \Hy@RestoreLastskip
10632 }
10633 \providecommand*\@pdfview{XYZ}
10634 \providecommand*\@pdfborder{0 0 1}
10635 \providecommand*\@pdfborderstyle{}
10636 \def\hyper@anchor#1{%
10637     \@pdfm@dest{#1}%
10638 }
10639 \def\hyper@anchorstart#1{%
10640     \Hy@activeanchortrue
10641     \@pdfm@dest{#1}%
10642 }
10643 \def\hyper@anchorend{%
10644     \Hy@activeanchorfalse
10645 }
10646 \newcounter{Hy@AnnotLevel}
10647 \ifHy@ocgcolorlinks
10648     \def\OBJ@OCG@view{@OCG@view}%
10649     \@pdfm@mark{%
10650         obj \OBJ@OCG@view <<%
10651         /Type/OCG%
10652         /Name(View)%
10653         /Usage<<%
10654         /Print<<%
10655         /PrintState/OFF%
10656         >>%
10657         /View<<%
10658         /ViewState/ON%
10659         >>%
10660         >>%
10661         >>%
10662     }%
10663     \@pdfm@mark{close \OBJ@OCG@view}%
10664     \def\OBJ@OCG@print{@OCG@print}%
10665     \@pdfm@mark{%
10666         obj \OBJ@OCG@print <<%
10667         /Type/OCG%
10668         /Name(Print)%
10669         /Usage<<%
10670         /Print<<%
10671         /PrintState/ON%
10672         >>%

```

```

10673     /View<<%
10674     /ViewState/OFF%
10675     >>%
10676     >>%
10677     >>%
10678 }%
10679 \@pdfm@mark{close \OBJ@OCG@print}%
10680 \def\OBJ@OCGs{@OCGs}%
10681 \@pdfm@mark{%
10682   obj \OBJ@OCGs [%
10683     \OBJ@OCG@view\space\OBJ@OCG@print
10684   ]%
10685 }%
10686 \@pdfm@mark{close \OBJ@OCGs}%
10687 \@pdfm@mark{%
10688   put @catalog <<%
10689     /OCProperties<<%
10690     /OCGs \OBJ@OCGs
10691     /D<<%
10692     /OFF[\OBJ@OCG@print]%
10693     /AS[%
10694       <<%
10695         /Event/View%
10696         /OCGs \OBJ@OCGs
10697         /Category[/View]%
10698       >>%
10699       <<%
10700         /Event/Print%
10701         /OCGs \OBJ@OCGs
10702         /Category[/Print]%
10703       >>%
10704       <<%
10705         /Event/Export%
10706         /OCGs \OBJ@OCGs
10707         /Category[/Print]%
10708       >>%
10709     ]%
10710     >>%
10711     >>%
10712     >>%
10713 }%
10714 \AtBeginShipout{%
10715   \setbox\AtBeginShipoutBox=\hbox{%
10716     \copy\AtBeginShipoutBox
10717     \@pdfm@mark{%
10718       put @resources <<%
10719         /Properties<<%
10720         /OCView \OBJ@OCG@view
10721         /OCPrint \OBJ@OCG@print
10722       >>%
10723       >>%
10724     }%
10725   }%
10726 }%
10727 \Hy@AtBeginDocument{%
10728   \def\Hy@colorlink#1{%
10729     \begingroup

```

```

10730 \ifHy@ocgcolorlinks
10731 \def\Hy@ocgcolor{#1}%
10732 \setbox0=\hbox\bgroup\color@begingroup
10733 \else
10734 \HyColor@UseColor#1%
10735 \fi
10736 }%
10737 \def\Hy@endcolorlink{%
10738 \ifHy@ocgcolorlinks
10739 \color@endgroup\egroup
10740 \mbox{%
10741 \@pdfm@mark{content /OC/OCPrint BDC}%
10742 \rlap{\copy0}%
10743 \@pdfm@mark{content EMC/OC/OCView BDC}%
10744 \begingroup
10745 \expandafter\HyColor@UseColor\Hy@ocgcolor
10746 \box0 %
10747 \endgroup
10748 \@pdfm@mark{content EMC}%
10749 }%
10750 \fi
10751 \endgroup
10752 }%
10753 }%
10754 \else
10755 \Hy@DisableOption{ocgcolorlinks}%
10756 \fi

```

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

```

10757 \def\Hy@BeginAnnot#1{%
10758 \global\advance\c@Hy@AnnotLevel\@ne
10759 \ifnum\c@Hy@AnnotLevel=\@ne
10760 #1%
10761 \fi
10762 }
10763 \def\Hy@endAnnot{%
10764 \ifnum\value{Hy@AnnotLevel}=\@ne
10765 \Hy@endcolorlink
10766 \@pdfm@mark{eann}%
10767 \fi
10768 \global\advance\c@Hy@AnnotLevel\m@ne
10769 }

10770 \def\Hy@undefinedname{UNDEFINED}
10771 \def\hyper@linkstart#1#2{%
10772 \Hy@VerboseLinkStart{#1}{#2}%
10773 \leavevmode
10774 \Hy@BeginAnnot{%
10775 \protected@edef\Hy@testname{#2}%
10776 \ifx\Hy@testname\@empty
10777 \Hy@Warning{%
10778 Empty destination name,\MessageBreak
10779 using ``\Hy@undefinedname'%
10780 }%
10781 \let\Hy@testname\Hy@undefinedname
10782 \else
10783 \Hy@pstringdef\Hy@testname{%

```

```

10784     \expandafter\HyperDestNameFilter\expandafter{%
10785     \Hy@testname
10786     }%
10787 }%
10788 \fi
10789 \@pdfm@mark{%
10790     bann<<%
10791     /Type/Annot%
10792     /Subtype/Link%
10793     \ifHy@pdfa /F 4\fi
10794     \Hy@setpdfborder
10795     \Hy@setpdfhighlight
10796     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10797     \else
10798         /C[\csname @#1bordercolor\endcsname]%
10799     \fi
10800     /A<<%
10801     /S/GoTo%
10802     /D(\Hy@testname)%
10803     \Hy@href@nextactionraw
10804     >>%
10805     >>%
10806     }%
10807     \expandafter\Hy@colorlink\csname @#1color\endcsname
10808     }%
10809 }
10810 \def\hyper@linkend{\Hy@EndAnnot}%
10811 \def\hyper@link#1#2#3{%
10812     \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10813 }
10814 \def\hyper@linkfile#1#2#3{%
10815     \leavevmode
10816     \Hy@BeginAnnot{%
10817         \def\Hy@pstringF{#2}%
10818         \Hy@CleanupFile\Hy@pstringF
10819         \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10820         \Hy@pstringdef\Hy@pstringD{#3}%
10821         \Hy@MakeRemoteAction
10822         \@pdfm@mark{%
10823             bann<<%
10824             /Type/Annot%
10825             /Subtype/Link%
10826             \ifHy@pdfa /F 4\fi
10827             \Hy@setpdfborder
10828             \Hy@setpdfhighlight
10829             \ifx\@filebordercolor\relax
10830             \else
10831                 /C[\@filebordercolor]%
10832             \fi
10833             /A<<%
10834             /S/GoToR%
10835             /F(\Hy@pstringF)%
10836             /D%
10837             \ifx\#3\%
10838                 [\Hy@href@page\@pdfremotestartview]%
10839             \else
10840                 (\Hy@pstringD)%

```

```

10841         \fi
10842         \Hy@SetNewWindow
10843         \Hy@href@nextactionraw
10844         >>%
10845     >>%
10846 }%
10847 \Hy@colorlink\@filecolor
10848 }%
10849 #1\Hy@xspace@end
10850 \Hy@EndAnnot
10851 }
10852 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
10853 \leavevmode
10854 \Hy@BeginAnnot{%
10855 \Hy@pstringdef\Hy@pstringF{#1}%
10856 \Hy@pstringdef\Hy@pstringP{#3}%
10857 \@pdfm@mark{%
10858 bann<<%
10859 /Type/Annot%
10860 /Subtype/Link%
10861 \ifHy@pdfa /F 4\fi
10862 \Hy@setpdfborder
10863 \Hy@setpdfhighlight
10864 \ifx\@runbordercolor\relax
10865 \else
10866 /C[\@runbordercolor]%
10867 \fi
10868 /A<<%
10869 /F(\Hy@pstringF)%
10870 /S/Launch%
10871 \Hy@SetNewWindow
10872 \ifx\|#3\|
10873 \else
10874 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10875 \fi
10876 \Hy@href@nextactionraw
10877 >>%
10878 >>%
10879 }%
10880 \Hy@colorlink\@runcolor
10881 }%
10882 #2\Hy@xspace@end
10883 \Hy@EndAnnot
10884 }
10885 \def\hyper@linkurl#1#2{%
10886 \leavevmode
10887 \Hy@BeginAnnot{%
10888 \Hy@pstringdef\Hy@pstringURI{#2}%
10889 \@pdfm@mark{%
10890 bann<<%
10891 /Type/Annot%
10892 /Subtype/Link%
10893 \ifHy@pdfa /F 4\fi
10894 \Hy@setpdfborder
10895 \Hy@setpdfhighlight
10896 \ifx\@urlbordercolor\relax
10897 \else

```

```

10898      /C[\@urlbordercolor]%
10899      \fi
10900      /A<<%
10901      /S/URI%
10902      /URI(\Hy@pstringURI)%
10903      \ifHy@href@ismap
10904      /IsMap true%
10905      \fi
10906      \Hy@href@nextactionraw
10907      >>%
10908      >>%
10909      }%
10910      \Hy@colorlink\@urlcolor
10911      }%
10912      #1\Hy@xspace@end
10913      \Hy@EndAnnot
10914  }
10915  \def\Acrobatmenu#1#2{%
10916    \Hy@Acrobatmenu{#1}{#2}{%
10917      \Hy@BeginAnnot{%
10918        \EdefEscapeName\Hy@temp@menu{#1}%
10919        \@pdfm@mark{%
10920          bann<<%
10921          /Type/Annot%
10922          /Subtype/Link%
10923          \ifHy@pdfa /F 4\fi
10924          \Hy@setpdfborder
10925          \Hy@setpdfhighlight
10926          \ifx\@menubordercolor\relax
10927            \else
10928              /C[\@menubordercolor]%
10929            \fi
10930            /A<<%
10931            /S/Named%
10932            /N/\Hy@temp@menu
10933            \Hy@href@nextactionraw
10934            >>%
10935            >>%
10936          }%
10937          \Hy@colorlink\@menucolor
10938        }%
10939        #2\Hy@xspace@end
10940        \Hy@EndAnnot
10941      }%
10942    }
10943
10944  \def\PDF@FinishDoc{%
10945    \Hy@UseMaketitleInfos
10946    \HyInfo@GenerateAddons
10947    \@pdfm@mark{%
10948      docinfo<<%
10949      /Title(\@pdftitle)%
10950      /Subject(\@pdfsubject)%
10951      /Creator(\@pdfcreator)%
10952      \ifx\@pdfcreationdate\@empty
10953        \else
10954          /CreationDate(\@pdfcreationdate)%

```



```

10955 \fi
10956 \ifx\@pdfmoddate\@empty
10957 \else
10958 /ModDate(\@pdfmoddate)%
10959 \fi
10960 /Author(\@pdfauthor)%
10961 \ifx\@pdfproducer\relax
10962 \else
10963 /Producer(\@pdfproducer)%
10964 \fi
10965 /Keywords(\@pdfkeywords)%
10966 \ifx\@pdftrapped\@empty
10967 \else
10968 /Trapped/\@pdftrapped
10969 \fi
10970 \HyInfo@Addons
10971 >>%
10972 }%
10973 \Hy@DisableOption{pdfauthor}%
10974 \Hy@DisableOption{pdftitle}%
10975 \Hy@DisableOption{pdfsubject}%
10976 \Hy@DisableOption{pdfcreator}%
10977 \Hy@DisableOption{addtopdfcreator}%
10978 \Hy@DisableOption{pdfcreationdate}%
10979 \Hy@DisableOption{pdfcreationdate}%
10980 \Hy@DisableOption{pdfmoddate}%
10981 \Hy@DisableOption{pdfproducer}%
10982 \Hy@DisableOption{pdfkeywords}%
10983 \Hy@DisableOption{pdftrapped}%
10984 \Hy@DisableOption{pdfinfo}%
10985 }

10986 \def\PDF@SetupDoc{%
10987 \edef\Hy@temp{%
10988 \ifHy@pdftoolbar\else /HideToolbar true\fi
10989 \ifHy@pdfmenubar\else /HideMenubar true\fi
10990 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10991 \ifHy@pdfwindow /FitWindow true\fi
10992 \ifHy@pdfcenterwindow /CenterWindow true\fi
10993 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10994 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10995 \Hy@UseNameKey{Direction}\@pdfdirection
10996 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10997 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10998 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10999 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11000 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11001 \Hy@UseNameKey{Duplex}\@pdfduplex
11002 \ifx\@pdfpicktraybypdfsize\@empty
11003 \else
11004 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11005 \fi
11006 \ifx\@pdfprintpagerange\@empty
11007 \else
11008 /PrintPageRange[\@pdfprintpagerange]%
11009 \fi
11010 \ifx\@pdfnumcopies\@empty
11011 \else

```

```

11012 /NumCopies \@pdfnumcopies
11013 \fi
11014 }%
11015 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11016 \@pdfm@mark{%
11017 docview<<%
11018 \ifx\@pdfstartpage\@empty
11019 \else
11020 \ifx\@pdfstartview\@empty
11021 \else
11022 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
11023 \fi
11024 \fi
11025 \ifx\@baseurl\@empty
11026 \else
11027 /URI<</Base(\Hy@pstringB)>>%
11028 \fi
11029 /PageMode/\@pdfpagemode
11030 \ifx\Hy@temp\@empty
11031 \else
11032 /ViewerPreferences<<\Hy@temp>>%
11033 \fi
11034 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11035 \ifx\@pdflang\relax
11036 \else
11037 /Lang(\@pdflang)%
11038 \fi
11039 >>%
11040 }%
11041 \ifx\@pdfpagescrop\@empty
11042 \else
11043 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
11044 \fi
11045 }
11046 </dvipdfm | xetex>
11047 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

11048 \def\hyper@pagetransition{%
11049 \ifx\@pdfpagetransition\relax
11050 \else
11051 \ifx\@pdfpagetransition\@empty
11052 \else
11053 \special{pdf:put @thispage %
11054 <</Trans<</S/\@pdfpagetransition>>>>%
11055 }%
11056 \fi
11057 \fi
11058 }

```

\hyper@pageduration

```

11059 \def\hyper@pageduration{%
11060 \ifx\@pdfpageduration\relax
11061 \else
11062 \ifx\@pdfpageduration\@empty
11063 \else
11064 \special{pdf:put @thispage %

```

```

11065 <</Dur \@pdfpageduration>>%
11066 }%
11067 \fi
11068 \fi
11069 }

```

\hyper@pagehidden

```

11070 \def\hyper@pagehidden{%
11071 \ifHy@useHidKey
11072 \special{pdf:put @thispage %
11073 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11074 }%
11075 \fi
11076 }

11077 \g@addto@macro\Hy@EveryPageBoxHook{%
11078 \hyper@pagetransition
11079 \hyper@pageduration
11080 \hyper@pagehidden
11081 }

11082 </dvipdfm | xetex>

```

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

```

11083 <*\dvipdfm>
11084 \AtBeginShipoutFirst{%
11085 \ifHy@setpagesize
11086 \begingroup
11087 \@ifundefined{stockwidth}{-%
11088 \ifdim\paperwidth>\z@
11089 \ifdim\paperheight>\z@
11090 \special{papersize=\the\paperwidth,\the\paperheight}%
11091 \fi
11092 \fi
11093 }{%
11094 \ifdim\stockwidth>\z@
11095 \ifdim\stockheight>\z@
11096 \special{papersize=\the\stockwidth,\the\stockheight}%
11097 \fi
11098 \fi
11099 }%
11100 \endgroup
11101 \fi
11102 \Hy@DisableOption{setpagesize}%
11103 }
11104 </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.

```

11105 <*\vtexhtml>
11106 \providecommand*\XR@ext}{htm}
11107 \RequirePackage{vtexhtml}
11108 \newif\if@Localurl
11109 \let\PDF@FinishDoc\ltx@empty
11110 \def\PDF@SetupDoc{%

```

```

11111 \ifx\@baseurl\@empty
11112 \else
11113 \special{!direct <base href="\@baseurl">}%
11114 \fi
11115 }
11116 \def\@urltype{url}
11117 \def\hyper@link#1#2#3{%
11118 \Hy@VerboseLinkStart{#1}{#2}%
11119 \leavevmode
11120 \special{!direct <a href=%
11121 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11122 #3\Hy@xspace@end
11123 \special{!direct </a>}%
11124 }
11125 \def\hyper@linkurl#1#2{%
11126 \begingroup
11127 \hyper@chars
11128 \leavevmode
11129 \MathBSuppress=1\relax
11130 \special{!direct <a href=%
11131 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
11132 #1\Hy@xspace@end
11133 \MathBSuppress=0\relax
11134 \special{!direct </a>}%
11135 \endgroup
11136 }
11137 \def\hyper@linkfile#1#2#3{%
11138 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\###3\fi}%
11139 }
11140 \def\hyper@linkstart#1#2{%
11141 \Hy@VerboseLinkStart{#1}{#2}%
11142 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
11143 \@Localurltrue
11144 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
11145 \else
11146 \@Localurlfalse
11147 \begingroup
11148 \hyper@chars
11149 \special{!aref \HyperDestNameFilter{#2}}%
11150 \endgroup
11151 \fi
11152 }
11153 \def\hyper@linkend{%
11154 \if@Localurl
11155 \special{!endaref}%
11156 \else
11157 \special{!direct </a>}%
11158 \fi
11159 }
11160 \Hy@WrapperDef\hyper@anchorstart#1{%
11161 \Hy@SaveLastskip
11162 \Hy@VerboseAnchor{#1}%
11163 \begingroup
11164 \hyper@chars
11165 \special{!aname #1}%
11166 \special{!direct <a name=%
11167 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%

```

```

11168 \endgroup
11169 \Hy@activeanchortrue
11170 }
11171 \def\hyper@anchorend{%
11172 \special{!direct </a>}%
11173 \Hy@activeanchorfalse
11174 \Hy@RestoreLastskip
11175 }
11176 \Hy@WrapperDef\hyper@anchor#1{%
11177 \Hy@SaveLastskip
11178 \Hy@VerboseAnchor{#1}%
11179 \begingroup
11180 \let\protect=\string
11181 \hyper@chars
11182 \leavevmode
11183 \special{!aname #1}%
11184 \special{!direct <a name=%
11185 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
11186 \endgroup
11187 \Hy@activeanchortrue
11188 \bgroup\anchor@spot\egroup
11189 \special{!direct </a>}%
11190 \Hy@activeanchorfalse
11191 \Hy@RestoreLastskip
11192 }
11193 \def\@Form[#1]{%
11194 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11195 }
11196 \let\@endForm\ltx@empty
11197 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11198 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11199 }
11200 \def\@TextField[#1]#2{% parameters, label
11201 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11202 }
11203 \def\@CheckBox[#1]#2{% parameters, label
11204 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11205 }
11206 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11207 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11208 }
11209 \def\@PushButton[#1]#2{% parameters, label
11210 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11211 }
11212 \def\@Reset[#1]#2{%
11213 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11214 }
11215 \def\@Submit[#1]#2{%
11216 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11217 }
11218 </vtexhtml>
11219 <*vtex>

```

VTeX version 6.68 supports `\mediawidth` and `\mediaheight`. The `\ifx` construct is better than a `\csname`, because it avoids the definition and the hash table entry of a previous undefined macro.

```

11220 \ifx\mediaheight\@undefined

```

```

11221 \else
11222   \ifx\mediaheight\relax
11223   \else
11224     \ifHy@setpagesize
11225       \providecommand*\VTeXInitMediaSize{%
11226         \ltx@ifundefined{stockwidth}{%
11227           \ifdim\paperheight>0pt %
11228             \setlength\mediaheight\paperheight
11229           \fi
11230           \ifdim\paperheight>0pt %
11231             \setlength\mediawidth\paperwidth
11232           \fi
11233         }{%
11234           \ifdim\stockheight>0pt %
11235             \setlength\mediaheight\stockheight
11236           \fi
11237           \ifdim\stockwidth>0pt %
11238             \setlength\mediawidth\stockwidth
11239           \fi
11240         }%
11241       }%
11242     \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11243   \fi
11244   \Hy@DisableOption{setpagesize}%
11245 \fi
11246 \fi

```

Older versions of VTeX require xyz in lower case.

```

11247 \providecommand*\@pdfview{xyz}
11248 \providecommand*\@pdfborder{0 0 1}
11249 \providecommand*\@pdfborderstyle{}
11250 \let\CurrentBorderColor\@linkbordercolor
11251 \Hy@WrapperDef\hyper@anchor#1{%
11252   \Hy@SaveLastskip
11253   \Hy@VerboseAnchor{#1}%
11254   \begingroup
11255     \let\protect=\string
11256     \hyper@chars
11257     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11258   \endgroup
11259   \Hy@activeanchortrue
11260   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11261   \Hy@activeanchorfalse
11262   \Hy@RestoreLastskip
11263 }
11264 \Hy@WrapperDef\hyper@anchorstart#1{%
11265   \Hy@SaveLastskip
11266   \Hy@VerboseAnchor{#1}%
11267   \begingroup
11268     \hyper@chars
11269     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11270   \endgroup
11271   \Hy@activeanchortrue
11272 }
11273 \def\hyper@anchorend{%
11274   \Hy@activeanchorfalse
11275   \Hy@RestoreLastskip
11276 }

```

```

11277 \def\@urltype{url}
11278 \def\Hy@undefinedname{UNDEFINED}
11279 \def\hyper@linkstart#1#2{%
11280   \Hy@VerboseLinkStart{#1}{#2}%
11281   \Hy@pstringdef\Hy@pstringURI{#2}%
11282   \expandafter\Hy@colorlink\csname @#1color\endcsname
11283   \ltx@ifundefined{@#1bordercolor}{%
11284     \let\CurrentBorderColor\relax
11285   }{%
11286     \edef\CurrentBorderColor{%
11287       \csname @#1bordercolor\endcsname
11288     }%
11289   }%
11290   \def\Hy@tempa{#1}%
11291   \ifx\Hy@tempa\@urltype
11292     \special{!%
11293       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11294       \ifHy@href@ismap
11295         /IsMap true%
11296       \fi
11297       \Hy@href@nextactionraw
11298       >,%
11299       a=<%
11300       \ifHy@pdfa /F 4\fi
11301       \Hy@setpdfborder
11302       \ifx\CurrentBorderColor\relax
11303         \else
11304           /C [\CurrentBorderColor]%
11305         \fi
11306       >%
11307     }%
11308   \else
11309     \protected@edef\Hy@testname{#2}%
11310     \ifx\Hy@testname\@empty
11311       \Hy@Warning{%
11312         Empty destination name,\MessageBreak
11313         using ``\Hy@undefinedname'%
11314       }%
11315       \let\Hy@testname\Hy@undefinedname
11316     \fi
11317     \special{!%
11318       aref \expandafter\HyperDestNameFilter
11319       \expandafter{\Hy@testname};%
11320       a=<%
11321       \ifHy@pdfa /F 4\fi
11322       \Hy@setpdfborder
11323       \ifx\CurrentBorderColor\relax
11324         \else
11325           /C [\CurrentBorderColor]%
11326         \fi
11327       >%
11328     }%
11329   \fi
11330 }
11331 \def\hyper@linkend{%
11332   \special{!endaref}%
11333   \Hy@endcolorlink

```

```

11334 }
11335 \def\hyper@linkfile#1#2#3{%
11336   \leavevmode
11337   \def\Hy@pstringF{#2}%
11338   \Hy@CleanupFile\Hy@pstringF
11339   \special{!%
11340     aref <%
11341     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11342     f=\Hy@pstringF>#3;%
11343     a=<%
11344     \ifHy@pdfa /F 4\fi
11345     \Hy@setpdfborder
11346     \ifx\@filebordercolor\relax
11347       \else
11348         /C [\@filebordercolor]%
11349       \fi
11350     >%
11351   }%
11352   \Hy@colorlink\@filecolor
11353   #1\Hy@xspace@end
11354   \Hy@endcolorlink
11355   \special{!endaref}%
11356 }
11357 \def\hyper@linkurl#1#2{%
11358   \begingroup
11359   \Hy@pstringdef\Hy@pstringURI{#2}%
11360   \hyper@chars
11361   \leavevmode
11362   \special{!%
11363     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11364     \ifHy@href@ismap
11365       /IsMap true%
11366     \fi
11367     \Hy@href@nextactionraw
11368     >,%
11369     a=<%
11370     \ifHy@pdfa /F 4\fi
11371     \Hy@setpdfborder
11372     \ifx\@urlbordercolor\relax
11373       \else
11374         /C [\@urlbordercolor]%
11375       \fi
11376     >%
11377   }%
11378   \Hy@colorlink\@urlcolor
11379   #1\Hy@xspace@end
11380   \Hy@endcolorlink
11381   \special{!endaref}%
11382   \endgroup
11383 }
11384 \def\hyper@link#1#2#3{%
11385   \Hy@VerboseLinkStart{#1}{#2}%
11386   \ltx@ifundefined{#@#1bordercolor}{%
11387     \let\CurrentBorderColor\relax
11388   }{%
11389     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11390   }%

```



```

11391 \leavevmode
11392 \protected@edef\Hy@testname{#2}%
11393 \ifx\Hy@testname\@empty
11394   \Hy@Warning{%
11395     Empty destination name,\MessageBreak
11396     using ``\Hy@undefinedname'%
11397   }%
11398   \let\Hy@testname\Hy@undefinedname
11399 \fi
11400 \special{!%
11401   aref \expandafter\HyperDestNameFilter
11402     \expandafter{\Hy@testname};%
11403   a=<%
11404     \ifHy@pdfa /F 4\fi
11405     \Hy@setpdfborder
11406     \ifx\CurrentBorderColor\relax
11407       \else
11408         /C [\CurrentBorderColor]%
11409     \fi
11410   >%
11411 }%
11412 \expandafter
11413 \Hy@colorlink\csmame @#1color\endcsmame
11414 #3\Hy@xspace@end
11415 \Hy@endcolorlink
11416 \special{!endaref}%
11417 }
11418 \def\hyper@image#1#2{%
11419   \hyper@linkurl{#2}{#1}%
11420 }
11421 \def\@hyper@launch run:#1\#2#3{%
11422   \Hy@pstringdef\Hy@pstringF{#1}%
11423   \Hy@pstringdef\Hy@pstringP{#3}%
11424   \leavevmode
11425   \special{!aref %
11426     <u=%
11427       /Type/Action%
11428       /S/Launch%
11429       /F(\Hy@pstringF)%
11430       \Hy@SetNewWindow
11431       \ifx\#3\%
11432         \else
11433           /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11434         \fi
11435       \Hy@href@nextactionraw
11436     >,%
11437     a=<%
11438       \ifHy@pdfa /F 4\fi
11439       \Hy@setpdfborder
11440       \ifx\@runbordercolor\relax
11441         \else
11442           /C[\@runbordercolor]%
11443       \fi
11444     >%
11445   }%
11446   \Hy@colorlink\@runcolor
11447   #2\Hy@xspace@end

```

```

11448 \Hy@endcolorlink
11449 \special{!endaref}%
11450 }
11451 \def\Acrobatmenu#1#2{%
11452 \EdefEscapeName\Hy@temp@menu{#1}%
11453 \Hy@Acrobatmenu{#1}{#2}{%
11454 \special{!%
11455   aref <u=/S /Named /N /\Hy@temp@menu>;%
11456   a=<%
11457     \ifHy@pdfa /F 4\fi
11458     \Hy@setpdfborder
11459     \ifx\@menubordercolor\relax
11460     \else
11461       /C[\@menubordercolor]%
11462     \fi
11463   >%
11464 }%
11465 \Hy@colorlink\@menucolor
11466   #2\Hy@xspace@end
11467 \Hy@endcolorlink
11468 \special{!endaref}%
11469 }%
11470 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for V_T_EX 7.02 or later.

Please never use \ifundefined{V_T_EXversion}{..}{..} *globally*.

```

11471 \ifnum\Hy@VTeXversion<702 %
11472 \else
11473 \def\hyper@pagetransition{%
11474 \ifx\@pdfpagetransition\relax
11475 \else
11476 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

11477 \else
11478 \hvtex@parse@trans\@pdfpagetransition
11479 \fi
11480 \fi
11481 }%

```

I have to write an “honest” parser to convert raw PDF code into V_T_EX \special.
(AVK)

Syntax of V_T_EX \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:

```
11482 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11483 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11484 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11485 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11486 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11487 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11488 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
11489 \def\hvtex@par@dimension{/Dm}%
11490 \def\hvtex@par@direction{/Di}%
11491 \def\hvtex@par@duration{/D}%
11492 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11493 \def\hvtex@gettoken{%
11494   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11495 }%
```

Notice that tokens in the input buffer must be space delimited.

```
11496 \def\hvtex@gettoken@#1 #2\@nil{%
11497   \edef\hvtex@token{#1}%
11498   \edef\hvtex@buffer{#2}%
11499 }%
11500 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
11501 \let\hvtex@trans@code\@empty
11502 \let\hvtex@param@dimension\@empty
11503 \let\hvtex@param@direction\@empty
11504 \let\hvtex@param@duration\@empty
11505 \let\hvtex@param@motion\@empty
11506 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
11507 \hvtex@gettoken
11508 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
11509   \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
11510   \else
11511     \hvtex@gettoken
11512   \fi
11513 \fi
11514 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
11515 \hvtex@trans@params
11516 }%
```

Reentrantable macro to parse optional parameters.

```
11517 \def\hvtex@trans@params{%
11518   \ifx\hvtex@buffer\@empty
11519   \else
11520     \hvtex@gettoken
```

```

11521 \let\hvtex@trans@par\hvtex@token
11522 \ifx\hvtex@buffer\@empty
11523 \else
11524 \hvtex@gettoken
11525 \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_{TEX} special takes it in milliseconds.

```

11526 \let\hvtex@param@duration\hvtex@token
11527 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

11528 \expandafter\edef\expandafter\hvtex@param@motion
11529 \expandafter{\expandafter\@gobble\hvtex@token}%
11530 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

11531 \expandafter\edef\expandafter\hvtex@param@dimension
11532 \expandafter{\expandafter\@gobble\hvtex@token}%
11533 \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).

```

11534 \let\hvtex@param@direction\hvtex@token
11535 \fi\fi\fi\fi
11536 \fi
11537 \fi
11538 \ifx\hvtex@buffer\@empty
11539 \let\next\hvtex@produce@trans
11540 \else
11541 \let\next\hvtex@trans@params
11542 \fi
11543 \next
11544 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

11545 \def\hvtex@produce@trans{%
11546 \let\vtex@trans@special\@empty
11547 \if S\hvtex@trans@code
11548 \edef\vtex@trans@special{\hvtex@trans@code
11549 \hvtex@param@dimension\hvtex@param@motion}%
11550 \else\if B\hvtex@trans@code
11551 \edef\vtex@trans@special{%
11552 \hvtex@trans@code\hvtex@param@dimension
11553 }%
11554 \else\if X\hvtex@trans@code
11555 \edef\vtex@trans@special{%
11556 \hvtex@trans@code\hvtex@param@motion
11557 }%
11558 \else\if W\hvtex@trans@code
11559 \edef\vtex@trans@special{%
11560 \hvtex@trans@code\hvtex@param@direction
11561 }%
11562 \else\if D\hvtex@trans@code
11563 \let\vtex@trans@special\hvtex@trans@code
11564 \else\if R\hvtex@trans@code
11565 \let\vtex@trans@special\hvtex@trans@code
11566 \else\if G\hvtex@trans@code
11567 \edef\vtex@trans@special{%

```

```

11568     \hvtex@trans@code\hvtex@param@direction
11569   }%
11570   \fi\fi\fi\fi\fi\fi
11571   \ifx\vtex@trans@special\@empty
11572   \else
11573     \ifx\hvtex@param@duration\@empty
11574     \else
11575       \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11576   \multiply\dimen@\@m
11577   \edef\vtex@trans@special{%
11578     \vtex@trans@special,\strip@pt\dimen@
11579   }%
11580   \fi

```

And all the mess is just for this.

```

11581   \special{!trans \vtex@trans@special}%
11582   \fi
11583 }%

11584 \def\hyper@pageduration{%
11585   \ifx\@pdfpageduration\relax
11586   \else
11587     \ifx\@pdfpageduration\@empty
11588     \special{!duration-}%
11589   \else
11590     \special{!duration \@pdfpageduration}%
11591   \fi
11592   \fi
11593 }%

11594 \def\hyper@pagehidden{%
11595   \ifHy@useHidKey
11596     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11597   \fi
11598 }%

11599 \g@addto@macro\Hy@EveryPageBoxHook{%
11600   \hyper@pagetransition
11601   \hyper@pageduration
11602   \hyper@pagehidden
11603 }%
11604 \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

```

11605 \ifx\@pdfproducer\relax
11606 \def\@pdfproducer{VTeX}%
11607 \ifnum\Hy@VTeXversion>\z@
11608   \count@\VTeXversion
11609   \divide\count@ 100 %

```

```

11610 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11611 \multiply\count@ -100 %
11612 \advance\count@\VTeXversion
11613 \edef\@pdfproducer{%
11614 \@pdfproducer
11615 .\ifnum\count@<10 0\fi\the\count@
11616 \ifx\VTeXOS\@undefined\else
11617 \ifnum\VTeXOS>0 %
11618 \ifnum\VTeXOS<6 %
11619 \space(%
11620 \ifcase\VTeXOS
11621 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11622 \fi
11623 )%
11624 \fi
11625 \fi
11626 \fi
11627 ,\space
11628 \ifnum\OpMode=\@one PDF\else PS\fi
11629 \space backend%
11630 \ifx\gexmode\@undefined\else
11631 \ifnum\gexmode>\z@\space with GeX\fi
11632 \fi
11633 }%
11634 \fi
11635 \fi

```

Current `!pdfinfo` key syntax:

Key	Field	Type
a	Author	String
b	CropBox	String
c	Creator	String
k	Keywords	String
l	PageLayout	PS
p	PageMode	PS
r	Producer	String
s	Subject	String
t	Title	String
u	URI	PS
v	ViewPreferences	PS

Note: PS objects that are dicts are in <<<.>>> (yuck; no choice).

```

11636 \def\PDF@SetupDoc{%
11637 \ifx\@pdfpagescrop\@empty
11638 \else
11639 \special{!pdfinfo b=<\@pdfpagescrop>}%
11640 \fi
11641 \ifx\@pdfstartpage\@empty
11642 \else
11643 \ifx\@pdfstartview\@empty
11644 \else
11645 \special{!onopen Page\@pdfstartpage}%
11646 \fi
11647 \fi
11648 \special{!pdfinfo p=</\@pdfpagemode>}%
11649 \ifx\@baseurl\@empty
11650 \else
11651 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%

```

```

11652 \fi
11653 \special{!pdfinfo v=<<<%
11654 \ifHy@pdftoolbar\else /HideToolbar true\fi
11655 \ifHy@pdfmenubar\else /HideMenubar true\fi
11656 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11657 \ifHy@pdfwindow /FitWindow true\fi
11658 \ifHy@pdfcenterwindow /CenterWindow true\fi
11659 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11660 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11661 \Hy@UseNameKey{Direction}\@pdfdirection
11662 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11663 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11664 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11665 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11666 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11667 \Hy@UseNameKey{Duplex}\@pdfduplex
11668 \ifx\@pdfpicktraybypdfsize\@empty
11669 \else
11670 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11671 \fi
11672 \ifx\@pdfprintpagerange\@empty
11673 \else
11674 /PrintPageRange[\@pdfprintpagerange]%
11675 \fi
11676 \ifx\@pdfnumcopies\@empty
11677 \else
11678 /NumCopies \@pdfnumcopies
11679 \fi
11680 >>>}%
11681 \ifx\@pdfpagelayout\@empty
11682 \else
11683 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11684 \fi
11685 }%
11686 \HyInfo@AddonUnsupportedtrue
11687 \define@key{Hyp}{pdfcreationdate}{%
11688 \Hy@Warning{%
11689 VTeX does not support pdfcreationdate.\MessageBreak
11690 Therefore its setting is ignored%
11691 }%
11692 }
11693 \define@key{Hyp}{pdfmoddate}{%
11694 \Hy@Warning{%
11695 VTeX does not support pdfmoddate.\MessageBreak
11696 Therefore its setting is ignored%
11697 }%
11698 }
11699 \def\PDF@FinishDoc{%
11700 \Hy@UseMaketitleInfos
11701 \HyInfo@TrappedUnsupported
11702 \special{!pdfinfo a=<\@pdfauthor>}%
11703 \special{!pdfinfo t=<\@pdftitle>}%
11704 \special{!pdfinfo s=<\@pdfsubject>}%
11705 \special{!pdfinfo c=<\@pdfcreator>}%
11706 \ifx\@pdfproducer\relax
11707 \else
11708 \special{!pdfinfo r=<\@pdfproducer>}%

```

```

11709 \fi
11710 \special{!pdfinfo k=<\@pdfkeywords>}%
11711 \Hy@DisableOption{pdfauthor}%
11712 \Hy@DisableOption{pdftitle}%
11713 \Hy@DisableOption{pdfsubject}%
11714 \Hy@DisableOption{pdfcreator}%
11715 \Hy@DisableOption{addtopdfcreator}%
11716 \Hy@DisableOption{pdfcreationdate}%
11717 \Hy@DisableOption{pdfcreationdate}%
11718 \Hy@DisableOption{pdfmoddate}%
11719 \Hy@DisableOption{pdfproducer}%
11720 \Hy@DisableOption{pdfkeywords}%
11721 \Hy@DisableOption{pdftrapped}%
11722 \Hy@DisableOption{pdfinfo}%
11723 }
11724 </vtex>

```

47.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

11725 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11726 <package>\providecommand*{\Hy@DistillerDestFix}{}
11727 <*pdfmark | dviwindo>
11728 \def\Hy@DistillerDestFix{%
11729   \begingroup
11730   \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11731   \ifnum \@ifundefined{OpMode}{0}{}%
11732     \@ifundefined{gexmode}{0}{}%
11733     \ifnum\gexmode>0 \OpMode\else 0\fi
11734   }>1 %
11735   \def\x##1{%
11736     \immediate\special{! =##1}%
11737   }%
11738   \fi
11739   \x{%
11740     /product where{%
11741       pop %
11742       product(Distiller)search{%
11743         pop pop pop %
11744         version(.)search{%
11745           exch pop exch pop%
11746           (3011)eq{%
11747             gsave %
11748             newpath 0 0 moveto closepath clip%
11749             /Courier findfont 10 scalefont setfont %
11750             72 72 moveto(.)show %

```



```

11751         grestore%
11752     }if%
11753     }{pop}ifelse%
11754     }{pop}ifelse%
11755     }if%
11756 }%
11757 \endgroup
11758 }
11759 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

Drivers that load `pdfmark.def` have to provide the correct macro definitions of

```

\@pdfproducer   for document information
\literalps@out   PostScript output
\headerps@out    PostScript output that goes in the header area

```

and the correct definitions of the following PostScript procedures:

```

H.S             start of anchor, link or rect
#1 H.A          end of anchor, argument=baselineskip in pt
#1 H.L          end of link, argument=baselineskip in pt
H.R             end of rect
H.B             raw rect code

```

```

11760 <*pdfmark>
11761 \Hy@breaklinks@unsupported
11762 \def\HyPat@ObjRef{%
11763   \[~{}]+\}%
11764 }
11765 \Hy@WrapperDef\hyper@anchor#1{%
11766   \Hy@SaveLastskip
11767   \Hy@VerboseAnchor{#1}%
11768   \begingroup
11769     \pdfmark[\anchor@spot]{%
11770       pdfmark=/DEST,%
11771       linktype=anchor,%
11772       View=/\@pdfview \@pdfviewparams,%
11773       DestAnchor={#1}%
11774     }%
11775   \endgroup
11776   \Hy@RestoreLastskip
11777 }
11778 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
11779 \Hy@WrapperDef\hyper@anchorstart#1{%
11780   \Hy@SaveLastskip
11781   \Hy@VerboseAnchor{#1}%
11782   \literalps@out{H.S}%
11783   \Hy@AllowHyphens
11784   \xdef\hyper@currentanchor{#1}%
11785   \Hy@activeanchortrue
11786 }
11787 \def\hyper@anchorend{%
11788   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11789   \pdfmark{%
11790     pdfmark=/DEST,%
11791     linktype=anchor,%

```

```

11792 View=/\@pdfview \@pdfviewparams,%
11793 DestAnchor=\hyper@currentanchor,%
11794 }%
11795 \Hy@activeanchorfalse
11796 \Hy@RestoreLastskip
11797 }
11798 \def\hyper@linkstart#1#2{%
11799 \Hy@VerboseLinkStart{#1}{#2}%
11800 \ifHy@breaklinks
11801 \else
11802 \leavevmode
11803 \ifmmode
11804 \def\Hy@LinkMath{$}%
11805 \else
11806 \let\Hy@LinkMath\ltx@empty
11807 \fi
11808 \Hy@SaveSpaceFactor
11809 \hbox\bgroup
11810 \Hy@RestoreSpaceFactor
11811 \Hy@LinkMath
11812 \fi
11813 \expandafter\Hy@colorlink\csname @#1color\endcsname
11814 \literalps@out{H.S}%
11815 \Hy@AllowHyphens
11816 \xdef\hyper@currentanchor{#2}%
11817 \gdef\hyper@currentlinktype{#1}%
11818 }
11819 \def\hyper@linkend{%
11820 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11821 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11822 \let\Hy@tempcolor\relax
11823 }{%
11824 \edef\Hy@tempcolor{%
11825 \csname @\hyper@currentlinktype bordercolor\endcsname
11826 }%
11827 }%
11828 \pdfmark{%
11829 pdfmark=/ANN,%
11830 linktype=link,%
11831 Subtype=/Link,%
11832 PDFAFlags=4,%
11833 Dest=\hyper@currentanchor,%
11834 AcroHighlight=\@pdfhighlight,%
11835 Border=\@pdfborder,%
11836 BorderStyle=\@pdfborderstyle,%
11837 Color=\Hy@tempcolor,%
11838 Raw=H.B%
11839 }%
11840 \Hy@endcolorlink
11841 \ifHy@breaklinks
11842 \else
11843 \Hy@LinkMath
11844 \Hy@SaveSpaceFactor
11845 \egroup
11846 \Hy@RestoreSpaceFactor
11847 \fi
11848 }

```

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.

```
11849 \begingroup
11850 \catcode`P=12 %
11851 \catcode`T=12 %
11852 \lowercase{\endgroup
11853 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11854 }
11855 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}
```

`\hyper@pagetransition`

```
11856 \def\hyper@pagetransition{%
11857 \ifx\@pdfpagetransition\relax
11858 \else
11859 \ifx\@pdfpagetransition\@empty
11860 % 1. Does an old entry have to be deleted?
11861 % 2. If 1=yes, how to delete?
11862 \else
11863 \pdfmark{%
11864 pdfmark=/PUT,%
11865 Raw={%
11866 \string{ThisPage\string}%
11867 <</Trans << /S /\@pdfpagetransition\space >> >>%
11868 }%
11869 }%
11870 \fi
11871 \fi
11872 }
```

`\hyper@pageduration`

```
11873 \def\hyper@pageduration{%
11874 \ifx\@pdfpageduration\relax
11875 \else
11876 \ifx\@pdfpageduration\@empty
11877 % 1. Does an old entry have to be deleted?
11878 % 2. If 1=yes, how to delete?
11879 \else
11880 \pdfmark{%
11881 pdfmark=/PUT,%
11882 Raw={%
11883 \string{ThisPage\string}%
11884 <</Dur \@pdfpageduration>>%
11885 }%
11886 }%
11887 \fi
11888 \fi
11889 }
```

`\hyper@pagehidden`

```
11890 \def\hyper@pagehidden{%
11891 \ifHy@useHidKey
11892 \pdfmark{%
11893 pdfmark=/PUT,%
11894 Raw={%
11895 \string{ThisPage\string}%
11896 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11897 }
```

```

11897     }%
11898     }%
11899 \fi
11900 }

11901 \g@addto@macro\Hy@EveryPageBoxHook{%
11902   \hyper@pagetransition
11903   \hyper@pageduration
11904   \hyper@pagehidden
11905 }

11906 \def\hyper@image#1#2{%
11907   \hyper@linkurl{#2}{#1}%
11908 }

11909 \def\Hy@undefinedname{UNDEFINED}
11910 \def\hyper@link#1#2#3{%
11911   \Hy@VerboseLinkStart{#1}{#2}%
11912   \ltx@ifundefined{@#1bordercolor}{%
11913     \let\Hy@tempcolor\relax
11914   }{%
11915     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11916   }%
11917   \begingroup
11918     \protected@edef\Hy@testname{#2}%
11919     \ifx\Hy@testname\@empty
11920       \Hy@Warning{%
11921         Empty destination name,\MessageBreak
11922         using '\Hy@undefinedname'%
11923       }%
11924       \let\Hy@testname\Hy@undefinedname
11925     \fi
11926     \pdfmark[{#3}]{%
11927       Color=\Hy@tempcolor,%
11928       linktype={#1},%
11929       AcroHighlight=\@pdfhighlight,%
11930       Border=\@pdfborder,%
11931       BorderStyle=\@pdfborderstyle,%
11932       pdfmark=/ANN,%
11933       Subtype=/Link,%
11934       PDFAFlags=4,%
11935       Dest=\Hy@testname
11936     }%
11937   \endgroup
11938 }

11939 \newtoks\pdf@docset
11940 \def\PDF@FinishDoc{%
11941   \Hy@UseMaketitleInfos
11942   \Hy@Info@GenerateAddons
11943   \let\Hy@temp\@empty
11944   \ifx\@pdfcreationdate\@empty
11945   \else
11946     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11947   \fi
11948   \ifx\@pdfmoddate\@empty
11949   \else
11950     \expandafter\def\expandafter\Hy@temp\expandafter{%
11951       \Hy@temp
11952       ModDate=\@pdfmoddate,%
11953     }%

```

```

11954 \fi
11955 \ifx\@pdfproducer\relax
11956 \else
11957   \expandafter\def\expandafter\Hy@temp\expandafter{%
11958     \Hy@temp
11959     Producer=\@pdfproducer,%
11960   }%
11961 \fi
11962 \expandafter
11963 \pdfmark\expandafter{%
11964   \Hy@temp
11965   pdfmark=/DOCINFO,%
11966   Title=\@pdftitle,%
11967   Subject=\@pdfsubject,%
11968   Creator=\@pdfcreator,%
11969   Author=\@pdfauthor,%
11970   Keywords=\@pdfkeywords,%
11971   Trapped=\@pdftrapped
11972 }%
11973 \ifx\HyInfo@Addons\@empty
11974 \else
11975   \pdfmark{%
11976     pdfmark=/DOCINFO,%
11977     Raw={\HyInfo@Addons}%
11978   }%
11979 \fi
11980 \Hy@DisableOption{pdfauthor}%
11981 \Hy@DisableOption{pdftitle}%
11982 \Hy@DisableOption{pdfsubject}%
11983 \Hy@DisableOption{pdfcreator}%
11984 \Hy@DisableOption{addtopdfcreator}%
11985 \Hy@DisableOption{pdfcreationdate}%
11986 \Hy@DisableOption{pdfcreationdate}%
11987 \Hy@DisableOption{pdfmoddate}%
11988 \Hy@DisableOption{pdfproducer}%
11989 \Hy@DisableOption{pdfkeywords}%
11990 \Hy@DisableOption{pdftrapped}%
11991 \Hy@DisableOption{pdfinfo}%
11992 }
11993 \def\PDF@SetupDoc{%
11994   \def\Hy@temp{}%
11995   \ifx\@pdfstartpage\@empty
11996   \else
11997     \ifx\@pdfstartview\@empty
11998     \else
11999       \edef\Hy@temp{%
12000         ,Page=\@pdfstartpage
12001         ,View=\@pdfstartview
12002       }%
12003     \fi
12004   \fi
12005   \edef\Hy@temp{%
12006     \noexpand\pdfmark{%
12007       pdfmark=/DOCVIEW,%
12008       PageMode=/\@pdfpagemode
12009     }\Hy@temp
12010   }%

```

```

12011 }%
12012 \Hy@temp
12013 \ifx\@pdfpagescrop\@empty
12014 \else
12015 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12016 \fi
12017 \edef\Hy@temp{%
12018 \ifHy@pdftoolbar\else /HideToolbar true\fi
12019 \ifHy@pdfmenubar\else /HideMenubar true\fi
12020 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12021 \ifHy@pdffitwindow /FitWindow true\fi
12022 \ifHy@pdfcenterwindow /CenterWindow true\fi
12023 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12024 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12025 \Hy@UseNameKey{Direction}\@pdfdirection
12026 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12027 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12028 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12029 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12030 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12031 \Hy@UseNameKey{Duplex}\@pdfduplex
12032 \ifx\@pdfpicktraybypdfsize\@empty
12033 \else
12034 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12035 \fi
12036 \ifx\@pdfprintpagerange\@empty
12037 \else
12038 /PrintPageRange[\@pdfprintpagerange]%
12039 \fi
12040 \ifx\@pdfnumcopies\@empty
12041 \else
12042 /NumCopies \@pdfnumcopies
12043 \fi
12044 }%
12045 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12046 \pdfmark{%
12047 pdfmark=/PUT,%
12048 Raw={%
12049 \string{Catalog\string}<<%
12050 \ifx\Hy@temp\@empty
12051 \else
12052 /ViewerPreferences<<\Hy@temp>>%
12053 \fi
12054 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12055 \ifx\@pdflang\relax
12056 \else
12057 /Lang(\@pdflang)%
12058 \fi
12059 \ifx\@baseurl\@empty
12060 \else
12061 /URI<</Base(\Hy@pstringB)>>%
12062 \fi
12063 >>%
12064 }%
12065 }%
12066 }
12067 \pdfmark>

```

12068 \langle *pdfmarkbase \rangle

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.

```
12069 \newif\ifHy@pdfmarkerror
12070 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
12071 \def\pdfmark@[#1]#2{%
12072   \Hy@pdfmarkerrorfalse
12073   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12074   \@processme
12075   \let\pdf@type\relax
12076   \let\pdf@objdef\ltx@empty
12077   \kvsetkeys{PDF}{#2}%
12078   \ifHy@pdfmarkerror
12079   \else
12080     \ifx\pdf@type\relax
12081       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12082       \ifx\#1\%
12083         \else
12084           \pdf@rect{#1}%
12085         \fi
12086       \else
12087         \ifx\#1\%
12088           \literalps@out{%
12089             [%
12090             \ifx\pdf@objdef\ltx@empty
12091             \else
12092               /_objdef\string{\pdf@objdef\string}%
12093             \fi
12094             \the\pdf@toks\space\pdf@type\space pdfmark%
12095             }%
12096           \else
12097             \ltx@ifundefined{@\pdf@linktype color}{%
12098               \Hy@colorlink\@linkcolor
12099             }{%
12100               \expandafter\Hy@colorlink
12101               \csname @\pdf@linktype color\endcsname
12102             }%
12103             \pdf@rect{#1}%
12104             \literalps@out{%
12105               [%
12106               \ifx\pdf@objdef\ltx@empty
12107               \else
12108                 /_objdef\string{\pdf@objdef\string}%
12109               \fi
12110               \the\pdf@toks\space\pdf@type\space pdfmark%
12111               }%
12112               \Hy@endcolorlink
12113             \fi
12114           \fi
12115         \fi
12116       }
```

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}
```

```
12117 \newsavebox{\pdf@box}
12118 \providecommand*{\Hy@setouterhbox}{\sbox}
12119 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
12120 \def\Hy@DEST{/DEST}
12121 \def\pdf@rect#1{%
12122   \begingroup
12123   \chardef\x=1 %
12124   \def\Hy@temp{#1}%
12125   \ifx\Hy@temp\ltx@empty
12126     \chardef\x=0 %
12127   \else
12128     \def\y{\anchor@spot}%
12129     \ifx\Hy@temp\y
12130       \def\y{\relax}%
12131     \ifx\anchor@spot\y
12132       \chardef\x=0 %
12133     \fi
12134   \fi
12135 \fi
12136 \expandafter\endgroup
12137 \ifcase\x
12138   \literalps@out{H.S}%
12139   \literalps@out{H.R}%
12140 \else
12141   \leavevmode
12142   \Hy@SaveSpaceFactor
12143   \ifmmode
12144     \def\Hy@LinkMath{$}%
12145   \else
12146     \let\Hy@LinkMath\ltx@empty
12147   \fi
12148   \ifHy@breaklinks
12149     \Hy@setouterhbox\pdf@box{%
12150       \Hy@RestoreSpaceFactor
12151       \Hy@LinkMath
12152       \Hy@AllowHyphens#1\Hy@xspace@end
12153       \Hy@LinkMath
12154       \Hy@SaveSpaceFactor
12155     }%
12156   \else
12157     \sbox\pdf@box{%
12158       \Hy@RestoreSpaceFactor
12159       \Hy@LinkMath
12160       #1\Hy@xspace@end
12161       \Hy@LinkMath
```



```

12162 \Hy@SaveSpaceFactor
12163 }%
12164 \fi
12165 \dimen@ \ht \pdf@box
12166 \ifdim \dp \pdf@box = \z@
12167 \literalps@out{H.S}%
12168 \else
12169 \lower \dp \pdf@box \hbox{\literalps@out{H.S}}%
12170 \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...).

```

12171 \ifHy@breaklinks
12172 \ifhmode
12173 \Hy@breaklinksunhbox \pdf@box
12174 \else
12175 \box \pdf@box
12176 \fi
12177 \else
12178 \expandafter \box \pdf@box
12179 \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

12180 \ifdim \dimen@ = \z@
12181 \literalps@out{H.R}%
12182 \else
12183 \raise \dimen@ \hbox{\literalps@out{H.R}}%
12184 \fi
12185 \Hy@RestoreSpaceFactor
12186 \fi
12187 \ifx \pdf@type \Hy@DEST
12188 \else
12189 \pdf@addtoksx{H.B}%
12190 \fi
12191 }

```

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.

```

12192 \newtoks \pdf@toks
12193 \newtoks \pdf@defaulttoks
12194 \pdf@defaulttoks = {}%
12195 \def \pdf@addtoks#1#2{%
12196 \edef \@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12197 \@processme
12198 }
12199 \def \pdf@addtoksx#1{%
12200 \edef \@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12201 \@processme
12202 }
12203 \def \PDFdefaults#1{%
12204 \pdf@defaulttoks = {#1}%
12205 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

12206 % what is the type of pdfmark?
12207 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12208 % what is the link type?
12209 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12210 \def\pdf@linktype{link}
12211 % named object?
12212 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12213 \let\pdf@objdef\ltx@empty
12214 % parameter is a stream of PDF
12215 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12216 % parameter is a name
12217 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12218 % parameter is a array
12219 \define@key{PDF}{Border}{%
12220   \edef\Hy@temp{#1}%
12221   \ifx\Hy@temp@empty
12222     \else
12223       \pdf@addtoks{<<#1>>}{Border}% hash-ok
12224   \fi
12225 }
12226 \let\Hy@BorderArrayPatch@empty
12227 % parameter is a dictionary
12228 \define@key{PDF}{BorderStyle}{%
12229   \edef\Hy@temp{#1}%
12230   \ifx\Hy@temp@empty
12231     \else
12232       \pdf@addtoks{<<#1>>}{BS}%
12233   \fi
12234 }
12235 % parameter is a array
12236 \define@key{PDF}{Color}{%
12237   \ifx\relax#1\relax
12238     \else
12239       \pdf@addtoks{[#1]}{Color}% hash-ok
12240   \fi
12241 }
12242 % parameter is a string
12243 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12244 % parameter is a integer
12245 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12246 % parameter is a array
12247 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12248 % parameter is a string
12249 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12250 % parameter is a string or file
12251 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12252 % parameter is a destination
12253 \define@key{PDF}{Dest}{%
12254   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12255   \ifx\Hy@pstringDest@empty
12256     \Hy@pdfmarkerrortrue
12257     \Hy@Warning{Destination with empty name ignored}%
12258   \else
12259     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12260   \fi
12261 }

```

```

12262 \define@key{PDF}{DestAnchor}{%
12263   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12264   \ifx\Hy@pstringDest\@empty
12265     \Hy@pdfmarkerrortrue
12266     \Hy@Warning{Destination with empty name ignored}%
12267   \else
12268     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12269   \fi
12270 }
12271 % parameter is a string
12272 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12273 % parameter is a string
12274 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12275 % parameter is a int
12276 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12277 \define@key{PDF}{PDFAFlags}{%
12278   \ifHy@pdfa
12279     \pdf@addtoks{#1}{F}%
12280   \fi
12281 }
12282 % parameter is a name
12283 \define@key{PDF}{AcroHighlight}{%
12284   \begingroup
12285     \edef\x{#1}%
12286     \expandafter\endgroup\ifx\x\@empty
12287       \else
12288         \pdf@addtoks{#1}{H}%
12289       \fi
12290 }
12291 % parameter is a string
12292 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
12293 % parameter is a string
12294 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
12295 % parameter is a string
12296 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12297 % parameter is a string
12298 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
12299 % parameter is a Boolean
12300 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12301 % parameter is a integer or name
12302 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12303 % parameter is a name
12304 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12305 % parameter is a string
12306 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
12307 % parameter is a array
12308 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
12309 % parameter is a integer
12310 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12311 % parameter is a name
12312 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12313 % parameter is a string
12314 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
12315 % parameter is a string
12316 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
12317 % parameter is a string
12318 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}

```

```

12319 % parameter is an array
12320 \define@key{PDF}{View}{\pdf@addtoks{(#1)}{View}}% hash-ok
12321 % parameter is a string
12322 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12323 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
12324 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
12325 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
12326 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12327 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
12328 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
12329 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
12330 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
12331 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12332 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
12333 \define@key{PDF}{Trapped}{%
12334   \edef\Hy@temp{#1}%
12335   \ifx\Hy@temp\@empty
12336   \else
12337     \pdf@addtoks{/#1}{Trapped}%
12338   \fi
12339 }
12340
12341 </pdfmarkbase>
12342 <*pdfmark>
12343 \def\Acrobatmenu#1#2{%
12344   \EdefEscapeName\Hy@temp@menu{#1}%
12345   \Hy@Acrobatmenu{#1}{#2}{%
12346     \pdfmark[{#2}]{%
12347       linktype=menu,%
12348       pdfmark=/ANN,%
12349       AcroHighlight=\@pdfhighlight,%
12350       Border=\@pdfborder,%
12351       BorderStyle=\@pdfborderstyle,%
12352       Color=\@menubordercolor,%
12353       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12354       Subtype=/Link,%
12355       PDFAFlags=4%
12356     }%
12357   }%
12358 }

```

And now for some useful examples:

```

12359 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12360 \def\PDFNextPage@[#1]#2{%
12361   \pdfmark[{#2}]{%
12362     #1,%
12363     Border=\@pdfborder,%
12364     BorderStyle=\@pdfborderstyle,%
12365     Color=.2 .1 .5,%
12366     pdfmark=/ANN,%
12367     Subtype=/Link,%
12368     PDFAFlags=4,%
12369     Page=/Next%
12370   }%
12371 }
12372 \def\PDFPreviousPage{%

```

```

12373 \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12374 }
12375 \def\PDFPreviousPage@[#1]#2{%
12376 \pdfmark[{#2}]{%
12377 #1,%
12378 Border=\@pdfborder,%
12379 BorderStyle=\@pdfborderstyle,%
12380 Color=.4 .4 .1,%
12381 pdfmark=/ANN,%
12382 Subtype=/Link,%
12383 PDFAFlags=4,%
12384 Page=/Prev%
12385 }%
12386 }
12387 \def\PDFOpen#1{%
12388 \pdfmark{#1,pdfmark=/DOCVIEW}%
12389 }

```

This will only work if you use Distiller 2.1 or higher.

```

12390 \def\hyper@linkurl#1#2{%
12391 \begingroup
12392 \Hy@pstringdef\Hy@pstringURI{#2}%
12393 \hyper@chars
12394 \leavevmode
12395 \pdfmark[{#1}]{%
12396 pdfmark=/ANN,%
12397 linktype=url,%
12398 AcroHighlight=\@pdfhighlight,%
12399 Border=\@pdfborder,%
12400 BorderStyle=\@pdfborderstyle,%
12401 Color=\@urlbordercolor,%
12402 Action={<<%
12403 /Subtype/URI%
12404 /URI(\Hy@pstringURI)%
12405 \ifHy@href@ismap
12406 /IsMap true%
12407 \fi
12408 >>},%
12409 Subtype=/Link,%
12410 PDFAFlags=4%
12411 }%
12412 \endgroup
12413 }
12414 \def\hyper@linkfile#1#2#3{%
12415 \begingroup
12416 \def\Hy@pstringF{#2}%
12417 \Hy@CleanupFile\Hy@pstringF
12418 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12419 \Hy@pstringdef\Hy@pstringD{#3}%
12420 \Hy@MakeRemoteAction
12421 \leavevmode
12422 \pdfmark[{#1}]{%
12423 pdfmark=/ANN,%
12424 Subtype=/Link,%
12425 PDFAFlags=4,%
12426 AcroHighlight=\@pdfhighlight,%
12427 Border=\@pdfborder,%
12428 BorderStyle=\@pdfborderstyle,%

```

```

12429 linktype=file,%
12430 Color=\@filebordercolor,%
12431 Action={%
12432   <<%
12433     /S/GoToR%
12434     \Hy@SetNewWindow
12435     /F(\Hy@pstringF)%
12436     /D%
12437     \ifx\#3\%
12438       [\Hy@href@page\@pdfremotestartview]%
12439     \else
12440       (\Hy@pstringD)cvn%
12441     \fi
12442     \Hy@href@nextactionraw
12443   >>%
12444 }%
12445 }%
12446 \endgroup
12447 }
12448 \def\@hyper@launch run:#1\#2#3{%
12449   \begingroup
12450     \Hy@pstringdef\Hy@pstringF{#1}%
12451     \Hy@pstringdef\Hy@pstringP{#3}%
12452     \leavevmode
12453     \pdfmark[{#2}]{%
12454       pdfmark=/ANN,%
12455       Subtype=/Link,%
12456       PDFAFlags=4,%
12457       AcroHighlight=\@pdfhighlight,%
12458       Border=\@pdfborder,%
12459       BorderStyle=\@pdfborderstyle,%
12460       linktype=run,%
12461       Color=\@runbordercolor,%
12462       Action={%
12463         <<%
12464           /S/Launch%
12465           \Hy@SetNewWindow
12466           /F(\Hy@pstringF)%
12467           \ifx\#3\%
12468           \else
12469             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12470           \fi
12471           \Hy@href@nextactionraw
12472         >>%
12473       }%
12474     }%
12475   \endgroup
12476 }
12477 \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.

```

12478 < *dvips>
12479 \providecommand*\XR@ext>{pdf}
12480 \let\Hy@raisedlink\ltx@empty
12481 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12482 \def\headerps@out#1{\special{! #1}}%
12483 \input{pdfmark.def}%
12484 \ifx\@pdfproducer\relax
12485   \def\@pdfproducer{dvips + Distiller}%
12486 \fi
12487 \providecommand*\@pdfborder{0 0 1}
12488 \providecommand*\@pdfborderstyle{}
12489 \providecommand*\@pdfview{XYZ}
12490 \providecommand*\@pdfviewparams{ H.V}
12491 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12492 \g@addto@macro\Hy@FirstPageHook{%
12493   \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.

```

12494   /DvipsToPDF{72.27 mul Resolution div} def%
12495   /PDFToDvips{72.27 div Resolution mul} def%
12496   /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.

```

12497   /BorderArrayPatch{%
12498     [exch{%
12499       dup dup type/integertype eq exch type/realtype eq or%
12500       {BPToDvips}if%
12501     }forall]%
12502   }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.

```

12503   /HyperBorder {1 PDFToDvips} def%
12504   /H.V {pdf@hoff pdf@voff null} def%
12505   /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

```

12506   /H.S {%
12507     currentpoint %
12508     HyperBorder add /pdf@lly exch def %
12509     dup DvipsToPDF 72 add /pdf@hoff exch def %

```

```

12510   HyperBorder sub /pdf@llx exch def%
12511   } def%

```

The calculation of upper left y is done without raising the point in $\text{T}_{\text{E}}\text{X}$, 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`

```

12512   /H.L {%
12513     2 sub dup%
12514     /HyperBasePt exch def %
12515     PDFToDvips /HyperBaseDvips exch def %
12516     currentpoint %
12517     HyperBaseDvips sub /pdf@ury exch def%
12518     /pdf@urx exch def%
12519   } def%
12520   /H.A {%
12521     H.L %
12522     % | /pdf@voff| = the distance from the top of the page to a point
12523     % | \baselineskip| above the current point in PDF coordinates
12524     currentpoint exch pop %
12525     vsize 72 sub exch DvipsToPDF %
12526     HyperBasePt sub % baseline skip
12527     sub /pdf@voff exch def%
12528   } def%
12529   /H.R {%
12530     currentpoint %
12531     HyperBorder sub /pdf@ury exch def %
12532     HyperBorder add /pdf@urx exch def %
12533     % | /pdf@voff| = the distance from the top of the page to the current point, in
12534     % PDF coordinates
12535     currentpoint exch pop vsize 72 sub %
12536     exch DvipsToPDF sub /pdf@voff exch def%
12537   } def%
12538 }%
12539 }
12540 \AtBeginShipoutFirst{%
12541   \ifHy@setpagesize
12542     \begingroup
12543       \@ifundefined{stockwidth}{%
12544         \ifdim\paperwidth>\z@
12545           \ifdim\paperheight>\z@
12546             \special{papersize=\the\paperwidth,\the\paperheight}%
12547           \fi
12548         \fi
12549       }{%
12550         \ifdim\stockwidth>\z@
12551           \ifdim\stockheight>\z@
12552             \special{papersize=\the\stockwidth,\the\stockheight}%
12553           \fi
12554         \fi
12555       }%
12556     \endgroup
12557   \fi
12558   \Hy@DisableOption{setpagesize}%

```



```

12559 }
12560 \def\setpdfinkmargin#1{%
12561   \begingroup
12562     \setlength{\dimen@}{#1}%
12563     \literalps@out{%
12564       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12565     }%
12566   \endgroup
12567 }
12568 </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.

```

12569 (*vtexpdfmark)
12570 \providecommand*\XR@ext}{pdf}
12571 \let\Hy@raisedlink\ltx@empty
12572 \def\literalps@out#1{\special{pS:#1}}%
12573 \def\headerps@out#1{\immediate\special{pS:#1}}%
12574 \input{pdfmark.def}%
12575 \ifx\@pdfproducer\relax
12576   \ifnum\OpMode=\@ne
12577     \def\@pdfproducer{VTeX}%
12578   \else
12579     \def\@pdfproducer{VTeX + Distiller}%
12580   \fi
12581 \fi
12582 \providecommand*\@pdfborder{0 0 1}
12583 \providecommand*\@pdfborderstyle{}
12584 \providecommand*\@pdfview{XYZ}
12585 \providecommand*\@pdfviewparams{ H.V}
12586 \g@addto@macro\Hy@FirstPageHook{%
12587   \headerps@out{%
12588     /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.

```

12589   /HyperBorder {1} def%
12590   /H.V {pdf@hoff pdf@voff null} def%
12591   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12592   /H.S {%
12593     currentpoint %
12594     HyperBorder sub%
12595     /pdf@lly exch def %
12596     dup 72 add /pdf@hoff exch def %
12597     HyperBorder sub%
12598     /pdf@llx exch def%
12599   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12600 /H.L {%
12601 2 sub%
12602 /HyperBasePt exch def %
12603 currentpoint %
12604 HyperBasePt add HyperBorder add%
12605 /pdf@ury exch def %
12606 HyperBorder add%
12607 /pdf@urx exch def%
12608 } def%
12609 /H.A {%
12610 H.L %
12611 currentpoint exch pop %
12612 vsize 72 sub exch %
12613 HyperBasePt add add%
12614 /pdf@voff exch def%
12615 } def%
```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12616 /H.R {%
12617 currentpoint %
12618 HyperBorder add%
12619 /pdf@ury exch def %
12620 HyperBorder add%
12621 /pdf@urx exch def %
12622 currentpoint exch pop vsize 72 sub add%
12623 /pdf@voff exch def%
12624 } def%
12625 }%
12626 }

12627 \def\setpdfinkmargin#1{%
12628 \begingroup
12629 \setlength{\dimen@}{#1}%
12630 \literalps@out{%
12631 /HyperBorder{\strip@pt\dimen@}def%
12632 }%
12633 \endgroup
12634 }

12635 \</vtxpdfmark>
```

47.11 Textures

```

12636 \<*textures>
12637 \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.

```

12638 \begingroup
12639 \obeylines %
```

```

12640 \gdef\Hy@ps@CR{\noexpand
12641 }%
12642 \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`.

```

12643 \def\literalps@out#1{%
12644 \special{postscript 0 0 transform}%
12645 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12646 }%
12647 %

```

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.

```

12648 \def\headerps@out#1{%
12649 \special{%
12650 prepostscript TeXdict begin\Hy@ps@CR
12651 #1\Hy@ps@CR
12652 end%
12653 }%
12654 }%
12655 %

```

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.

```

12656 \g@addto@macro\Hy@FirstPageHook{%
12657 \headerps@out{%
12658 /betterpdfmark {%
12659 systemdict begin %
12660 dup /BP eq%
12661 {cleartomark gsave nulldevice []%
12662 {dup /EP eq%
12663 {cleartomark cleartomark grestore}%
12664 {cleartomark}%
12665 ifelse%
12666 }ifelse %
12667 end%
12668 }def\Hy@ps@CR
12669 ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12670 }% end of \headerps@out
12671 }% end of \AtBeginShipoutFirst
12672 %
12673 \input{pdfmark.def}%
12674 %
12675 \ifx\@pdfproducer\relax
12676 \def\@pdfproducer{Textures + Distiller}%

```

```

12677 \fi
12678 \providecommand*\@pdfborder{0 0 1}
12679 \providecommand*\@pdfborderstyle{}
12680 \providecommand*\@pdfview{XYZ}
12681 \providecommand*\@pdfviewparams{ H.V}
12682 %

```

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 .

```

12683 \Hy@AtBeginDocument{%
12684   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12685   /vsize {\Hy@pageheight} def%
12686   /DvipsToPDF {} def%
12687   /PDFToDvips {} def%
12688   /BPToDvips {} def%
12689   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12690   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12691   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12692   /H.S {%
12693     currentpoint %
12694     HyperBorder add /pdf@lly exch def %
12695     dup DvipsToPDF 72 add /pdf@hoff exch def %
12696     HyperBorder sub /pdf@llx exch def%
12697   } def\Hy@ps@CR
12698   /H.L {%
12699     2 sub %
12700     PDFToDvips /HyperBase exch def %
12701     currentpoint %
12702     HyperBase sub /pdf@ury exch def%
12703     /pdf@urx exch def%
12704   } def\Hy@ps@CR
12705   /H.A {%
12706     H.L %
12707     currentpoint exch pop %
12708     vsize 72 sub exch DvipsToPDF %
12709     HyperBase sub % baseline skip
12710     sub /pdf@voff exch def%
12711   } def\Hy@ps@CR
12712   /H.R {%
12713     currentpoint %
12714     HyperBorder sub /pdf@ury exch def %
12715     HyperBorder add /pdf@urx exch def %
12716     currentpoint exch pop vsize 72 sub %
12717     exch DvipsToPDF sub /pdf@voff exch def%
12718   } def\Hy@ps@CR
12719 }%
12720 }

12721 \def\setpdflinkmargin#1{%
12722   \begingroup
12723     \setlength{\dimen@}{#1}%
12724     \literalps@out{%

```

```

12725 /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12726 }%
12727 \endgroup
12728 }

12729 \Hy@AtBeginDocument{%
12730 \ifHy@colorlinks
12731 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12732 \fi
12733 }

```

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.

```

12734 \expandafter\let\expandafter\keepPDF@SetupDoc
12735 \csname PDF@SetupDoc\endcsname
12736 \def\PDF@SetupDoc{%
12737 \ifx\@baseurl\empty
12738 \else
12739 \special{html:<base href="\@baseurl">}%
12740 \fi
12741 \keepPDF@SetupDoc
12742 }

12743 \Hy@WrapperDef\hyper@anchor#1{%
12744 \Hy@SaveLastskip
12745 \Hy@VerboseAnchor{#1}%
12746 \begingroup
12747 \let\protect=\string
12748 \special{html:<a name=%
12749 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12750 \endgroup
12751 \Hy@activeanchortrue
12752 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12753 \special{html:</a>}%
12754 \Hy@activeanchorfalse
12755 \Hy@RestoreLastskip
12756 }

12757 \Hy@WrapperDef\hyper@anchorstart#1{%
12758 \Hy@SaveLastskip
12759 \Hy@VerboseAnchor{#1}%
12760 \begingroup
12761 \hyper@chars
12762 \special{html:<a name=%
12763 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12764 \endgroup
12765 \Hy@activeanchortrue
12766 }

12767 \def\hyper@anchorend{%
12768 \special{html:</a>}%
12769 \Hy@activeanchorfalse
12770 \Hy@RestoreLastskip
12771 }

12772 \def\@urltype{url}
12773 \def\hyper@linkstart#1#2{%
12774 \Hy@VerboseLinkStart{#1}{#2}%
12775 \expandafter\Hy@colorlink\csname @#1color\endcsname
12776 \def\Hy@tempa{#1}%
12777 \ifx\Hy@tempa\@urltype

```

```

12778 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12779 \else
12780 \begingroup
12781 \hyper@chars
12782 \special{%
12783     html:<a href=%
12784     \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
12785     }%
12786 \endgroup
12787 \fi
12788 }
12789 \def\hyper@linkend{%
12790 \special{html:</a>}}%
12791 \Hy@endcolorlink
12792 }
12793 \def\hyper@linkfile#1#2#3{%
12794 \hyper@linkurl{#1}{%
12795     \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
12796     }%
12797 }
12798 \def\hyper@linkurl#1#2{%
12799 \leavevmode
12800 \ifHy@raiselinks
12801 \Hy@SaveSpaceFactor
12802 \Hy@SaveSavedSpaceFactor
12803 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12804 \Hy@RestoreSavedSpaceFactor
12805 \@linkdim\dp\@tempboxa
12806 \lower\@linkdim\hbox{%
12807     \hyper@chars
12808     \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12809     }%
12810 \Hy@colorlink\@urlcolor
12811 \Hy@RestoreSpaceFactor
12812 #1\Hy@xspace@end
12813 \Hy@SaveSpaceFactor
12814 \@linkdim\ht\@tempboxa
12815 \advance\@linkdim by -6.5\p@
12816 \raise\@linkdim\hbox{\special{html:</a>}}%
12817 \Hy@endcolorlink
12818 \Hy@RestoreSpaceFactor
12819 \else
12820 \begingroup
12821 \hyper@chars
12822 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12823 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12824 \special{html:</a>}}%
12825 \Hy@endcolorlink
12826 \endgroup
12827 \fi
12828 }

```

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

```

12829 \def\hyper@link#1#2#3{%
12830 \Hy@VerboseLinkStart{#1}{#2}%
12831 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
12832 }
12833 \def\hyper@image#1#2{%

```

```

12834 \begingroup
12835   \hyper@chars
12836   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12837 \endgroup
12838 }
12839 </textures>

```

47.12 dvipsone

```

12840 % \subsection{dvipsone driver}
12841 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12842 % |\special| commands.
12843 <*dvipsone>
12844 \providecommand*\XR@ext>{pdf}
12845 \let\Hy@raisedlink\ltx@empty
12846 \providecommand*\@pdfborder{0 0 1}
12847 \providecommand*\@pdfborderstyle{}
12848 \def\literalps@out#1{\special{ps:#1}}%
12849 \def\headerps@out#1{\special{headertext=#1}}%
12850 \input{pdfmark.def}%
12851 \HyInfo@AddonUnsupportedtrue
12852 \def\PDF@FinishDoc{%
12853   \Hy@UseMaketitleInfos
12854   \HyInfo@TrappedUnsupported
12855   \special{PDF: Keywords \@pdfkeywords}%
12856   \special{PDF: Title \@pdftitle}%
12857   \special{PDF: Creator \@pdfcreator}%
12858   \ifx\@pdfcreationdate\@empty
12859   \else
12860     \special{PDF: CreationDate \@pdfcreationdate}%
12861   \fi
12862   \ifx\@pdfmoddate\@empty
12863   \else
12864     \special{PDF: ModDate \@pdfmoddate}%
12865   \fi
12866   \special{PDF: Author \@pdfauthor}%
12867   \ifx\@pdfproducer\relax
12868   \else
12869     \special{PDF: Producer \@pdfproducer}%
12870   \fi
12871   \special{PDF: Subject \@pdfsubject}%
12872   \Hy@DisableOption{pdfauthor}%
12873   \Hy@DisableOption{pdftitle}%
12874   \Hy@DisableOption{pdfsubject}%
12875   \Hy@DisableOption{pdfcreator}%
12876   \Hy@DisableOption{addtopdfcreator}%
12877   \Hy@DisableOption{pdfcreationdate}%
12878   \Hy@DisableOption{pdfcreationdate}%
12879   \Hy@DisableOption{pdfmoddate}%
12880   \Hy@DisableOption{pdfproducer}%
12881   \Hy@DisableOption{pdfkeywords}%
12882   \Hy@DisableOption{pdftrapped}%
12883   \Hy@DisableOption{pdfinfo}%
12884 }
12885 \def\PDF@SetupDoc{%
12886   \def\Hy@temp{}%
12887   \ifx\@pdfstartpage\@empty

```

```

12888 \else
12889 \ifx\@pdfstartview\@empty
12890 \else
12891 \edef\Hy@temp{%
12892 ,Page=\@pdfstartpage
12893 ,View=\@pdfstartview
12894 }%
12895 \fi
12896 \fi
12897 \edef\Hy@temp{%
12898 \noexpand\pdfmark{%
12899 pdfmark=/DOCVIEW,%
12900 PageMode=/\@pdfpagemode
12901 \Hy@temp
12902 }%
12903 }%
12904 \Hy@temp
12905 \ifx\@pdfpagescrop\@empty
12906 \else
12907 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12908 \fi
12909 \edef\Hy@temp{%
12910 \ifHy@pdftoolbar\else /HideToolbar true\fi
12911 \ifHy@pdfmenubar\else /HideMenubar true\fi
12912 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12913 \ifHy@pdfwindow /FitWindow true\fi
12914 \ifHy@pdfcenterwindow /CenterWindow true\fi
12915 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12916 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12917 \Hy@UseNameKey{Direction}\@pdfdirection
12918 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12919 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12920 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12921 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12922 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12923 \Hy@UseNameKey{Duplex}\@pdfduplex
12924 \ifx\@pdfpicktraybypdfsize\@empty
12925 \else
12926 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12927 \fi
12928 \ifx\@pdfprintpagerange\@empty
12929 \else
12930 /PrintPageRange[\@pdfprintpagerange]%
12931 \fi
12932 \ifx\@pdfnumcopies\@empty
12933 \else
12934 /NumCopies \@pdfnumcopies
12935 \fi
12936 }%
12937 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12938 \pdfmark{%
12939 pdfmark=/PUT,%
12940 Raw={%
12941 \string{Catalog\string}<<%
12942 \ifx\Hy@temp\@empty
12943 \else
12944 /ViewerPreferences<<\Hy@temp>>%

```



```

12945 \fi
12946 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12947 \ifx\@pdflang\relax
12948 \else
12949 /Lang(\@pdflang)%
12950 \fi
12951 \ifx\@baseurl\@empty
12952 \else
12953 /URI<</Base(\Hy@pstringB)>>%
12954 \fi
12955 >>%
12956 }%
12957 }%
12958 }
12959 \providecommand*\@pdfview{XYZ}
12960 \providecommand*\@pdfviewparams{ %
12961 gsave revscl currentpoint grestore %
12962 72 add exch pop null exch null%
12963 }
12964 \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 .

```

12965 \g@addto@macro\Hy@FirstPageHook{%
12966 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

12967 /DvipsToPDF { 65781 div } def%
12968 /PDFToDvips { 65781 mul } def%
12969 /BPToDvips{65781 mul}def%
12970 /HyperBorder { 1 PDFToDvips } def%
12971 /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.

```

12972 /BorderArrayPatch{%
12973 [exch{%
12974 dup dup type/integertype eq exch type/realtype eq or%
12975 {BPToDvips}if%
12976 }forall]%
12977 }def%
12978 /H.S {%
12979 currentpoint %
12980 HyperBorder add /pdf@lly exch def %
12981 dup DvipsToPDF 72 add /pdf@hoff exch def %
12982 HyperBorder sub /pdf@llx exch def%
12983 } def%
12984 /H.L {%
12985 2 sub %
12986 PDFToDvips /HyperBase exch def %
12987 currentpoint %
12988 HyperBase sub /pdf@ury exch def%
12989 /pdf@urx exch def%
12990 } def%
12991 /H.A {%

```

```

12992      H.L. %
12993      currentpoint exch pop %
12994      HyperBase sub % baseline skip
12995      DvipsToPDF /pdf@voff exch def%
12996    } def%
12997    /H.R. {%
12998      currentpoint %
12999      HyperBorder sub /pdf@ury exch def %
13000      HyperBorder add /pdf@urx exch def %
13001      currentpoint exch pop DvipsToPDF /pdf@voff exch def%
13002    } def%
13003  }%
13004 }

13005 \def\setpdfinkmargin#1{%
13006   \begingroup
13007     \setlength{\dimen@}{#1}%
13008     \literalps@out{%
13009       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13010     }%
13011   \endgroup
13012 }

13013 </dvipsone>

```

47.13 TeX4ht

```

13014 <*tex4ht>
13015 \providecommand*\XR@ext>{html}
13016 \let\Hy@raisedlink\ltx@empty
13017 \@ifpackageloaded{tex4ht}{%
13018   \Hy@InfoNoLine{tex4ht is already loaded}%
13019 }{%
13020   \RequirePackage[hTeX4ht]{tex4ht}%
13021 }
13022 \hyperlinkfileprefix{}
13023 \let\PDF@FinishDoc\ltx@empty
13024 \def\PDF@SetupDoc{%
13025   \ifx\@baseurl\@empty
13026     \else
13027       \special{t4ht=<base href="\@baseurl">}%
13028     \fi
13029 }
13030 \Hy@WrapperDef\hyper@anchor#1{%
13031   \Hy@SaveLastskip
13032   \Hy@VerboseAnchor{#1}%
13033   \begingroup
13034     \let\protect=\string
13035     \special{t4ht=<a name=%
13036       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13037   \endgroup
13038   \Hy@activeanchortrue
13039   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13040   \special{t4ht=</a>}%
13041   \Hy@activeanchorfalse
13042   \Hy@RestoreLastskip
13043 }
13044 \Hy@WrapperDef\hyper@anchorstart#1{%
13045   \Hy@SaveLastskip
13046   \Hy@VerboseAnchor{#1}%

```

```

13047 \begingroup
13048   \hyper@chars\special{t4ht=<a name=%
13049     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
13050 \endgroup
13051 \Hy@activeanchortrue
13052 }
13053 \def\hyper@anchorend{%
13054   \special{t4ht=</a>}}%
13055 \Hy@activeanchorfalse
13056 \Hy@RestoreLastskip
13057 }
13058 \def\@urltype{url}
13059 \def\hyper@linkstart#1#2{%
13060   \Hy@VerboseLinkStart{#1}{#2}%
13061   \expandafter\Hy@colorlink\curname @#1color\endcurname
13062   \def\Hy@tempa{#1}%
13063   \ifx\Hy@tempa\@urltype
13064     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}}%
13065   \else
13066     \begingroup
13067       \hyper@chars
13068       \special{t4ht=<a href=%
13069         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}}%
13070     \endgroup
13071   \fi
13072 }
13073 \def\hyper@linkend{%
13074   \special{t4ht=</a>}}%
13075 \Hy@endcolorlink
13076 }
13077 \def\hyper@linkfile#1#2#3{%
13078   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
13079 }
13080 \def\hyper@linkurl#1#2{%
13081   \leavevmode
13082   \ifHy@raiselinks
13083     \Hy@SaveSpaceFactor
13084     \Hy@SaveSavedSpaceFactor
13085     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13086     \Hy@RestoreSavedSpaceFactor
13087     \@linkdim\dp\@tempboxa
13088     \lower\@linkdim\hbox{%
13089       \begingroup
13090         \hyper@chars
13091         \special{%
13092           t4ht=<a href=\hyper@quote#2\hyper@quote>%
13093         }%
13094       \endgroup
13095     }%
13096     \Hy@colorlink\@urlcolor
13097     \Hy@RestoreSpaceFactor
13098     #1\Hy@xspace@end
13099     \Hy@SaveSpaceFactor
13100     \Hy@endcolorlink
13101     \@linkdim\ht\@tempboxa
13102     \advance\@linkdim by -6.5\p@
13103     \raise\@linkdim\hbox{\special{t4ht=</a>}}}%

```

```

13104 \Hy@RestoreSpaceFactor
13105 \else
13106 \begingroup
13107 \hyper@chars
13108 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13109 \Hy@colorlink\@urlcolor
13110 #1\Hy@xspace@end
13111 \Hy@endcolorlink
13112 \special{t4ht=</a>}%
13113 \endgroup
13114 \fi
13115 }

```

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

```

13116 \def\hyper@link#1#2#3{%
13117 \Hy@VerboseLinkStart{#1}{#2}%
13118 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
13119 }
13120 \def\hyper@image#1#2{%
13121 \begingroup
13122 \hyper@chars
13123 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
13124 \endgroup
13125 }
13126 \let\autoref\ref
13127 \ifx \rEFLiNK \UnDef
13128 \def\rEFLiNK #1#2{#2}%
13129 \fi
13130 \let\backref\ltx@gobble

```

Fix for `tex4ht`.

```

13131 \AtBeginDocument{%
13132 \expandafter
13133 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13134 \expandafter\def\csname Make:Label\endcsname#1#2{%
13135 \ifhmode
13136 \Hy@SaveSpaceFactor
13137 \else
13138 \global\Hy@SavedSpaceFactor=1000 %
13139 \fi
13140 \Hy@OrgMakeLabel{#1}{%
13141 \Hy@RestoreSpaceFactor
13142 #2\Hy@xspace@end%
13143 \Hy@SaveSpaceFactor
13144 }%
13145 \Hy@RestoreSpaceFactor
13146 }%
13147 }
13148 \</tex4ht>
13149 \<*tex4htcfg>
13150 \IfFileExists{\jobname.cfg}{\endinput}{}
13151 \Preamble{html}
13152 \begin{document}%
13153 \EndPreamble
13154 \def\TeX{TeX}
13155 \def\OMEGA{\Omega}
13156 \def\LaTeX{LaTeX}
13157 \def\LaTeXe{\LaTeXe}
13158 \def\eTeX{e-TeX}

```

```

13159 \def\MF{Metafont}
13160 \def\MP{MetaPost}
13161 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13162 (*pdfmark)
13163 \long\def\@Form[#1]{%
13164 \g@addto@macro\Hy@FirstPageHook{%
13165 \headerps@out{%
13166 [%
13167 /_objdef{pdfDocEncoding}%
13168 /type/dict%
13169 /OBJ pdfmark%
13170 [%
13171 {pdfDocEncoding}%
13172 <<%
13173 /Type/Encoding%
13174 /Differences[%
13175 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13176 /tilde %
13177 39/quotesingle %
13178 96/grave %
13179 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13180 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13181 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13182 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
13183 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13184 164/currency %
13185 166/brokenbar %
13186 168/dieresis/copyright/ordfeminine %
13187 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13188 /twosuperior/threesuperior/acute/mu %
13189 183/periodcentered/cedilla/onesuperior/ordmasculine %
13190 188/onequarter/onehalf/threequarters %
13191 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13192 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13193 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13194 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13195 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13196 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13197 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13198 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13199 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
13200 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13201 ]%
13202 >>%
13203 /PUT pdfmark%
13204 [%
13205 /_objdef{ZaDb}%
13206 /type/dict%
13207 /OBJ pdfmark%
13208 [%
13209 {ZaDb}%
13210 <<%
13211 /Type/Font%

```

```

13212 /Subtype/Type1%
13213 /Name/ZaDb%
13214 /BaseFont/ZapfDingbats%
13215 >>%
13216 /PUT pdfmark%
13217 [%
13218 /__objdef{Helv}%
13219 /type/dict%
13220 /OBJ pdfmark%
13221 [%
13222 {Helv}%
13223 <<%
13224 /Type/Font%
13225 /Subtype/Type1%
13226 /Name/Helv%
13227 /BaseFont/Helvetica%
13228 /Encoding{pdfDocEncoding}%
13229 >>%
13230 /PUT pdfmark%
13231 [%
13232 /__objdef{aform}%
13233 /type/dict%
13234 /OBJ pdfmark%
13235 [%
13236 /__objdef{afields}%
13237 /type/array%
13238 /OBJ pdfmark%
13239 [%
13240 /__objdef{corder}%
13241 /type/array%
13242 /OBJ pdfmark%
13243 {%
13244 [%
13245 /BBox[0 0 100 100]%
13246 /__objdef{Check}%
13247 /BP pdfmark %
13248 1 0 0 setrgbcolor%
13249 /ZapfDingbats 80 selectfont %
13250 20 20 moveto%
13251 (4)show%
13252 [/EP pdfmark%
13253 [%
13254 /BBox[0 0 100 100]%
13255 /__objdef{Cross}%
13256 /BP pdfmark %
13257 1 0 0 setrgbcolor%
13258 /ZapfDingbats 80 selectfont %
13259 20 20 moveto%
13260 (8)show%
13261 [/EP pdfmark%
13262 [%
13263 /BBox[0 0 250 100]%
13264 /__objdef{Submit}%
13265 /BP pdfmark %
13266 0.6 setgray %
13267 0 0 250 100 rectfill %
13268 1 setgray %

```

```

13269 2 2 moveto %
13270 2 98 lineto %
13271 248 98 lineto %
13272 246 96 lineto %
13273 4 96 lineto %
13274 4 4 lineto %
13275 fill %
13276 0.34 setgray %
13277 248 98 moveto %
13278 248 2 lineto %
13279 2 2 lineto %
13280 4 4 lineto %
13281 246 4 lineto %
13282 246 96 lineto %
13283 fill%
13284 /Helvetica 76 selectfont %
13285 0 setgray %
13286 8 22.5 moveto%
13287 (Submit)show%
13288 [/EP pdfmark%
13289 [%
13290 /BBox[0 0 250 100]%
13291 /_objdef{SubmitP}%
13292 /BP pdfmark %
13293 0.6 setgray %
13294 0 0 250 100 rectfill %
13295 0.34 setgray %
13296 2 2 moveto %
13297 2 98 lineto %
13298 248 98 lineto %
13299 246 96 lineto %
13300 4 96 lineto %
13301 4 4 lineto %
13302 fill %
13303 1 setgray %
13304 248 98 moveto %
13305 248 2 lineto %
13306 2 2 lineto %
13307 4 4 lineto %
13308 246 4 lineto %
13309 246 96 lineto %
13310 fill%
13311 /Helvetica 76 selectfont %
13312 0 setgray %
13313 10 20.5 moveto%
13314 (Submit)show%
13315 [/EP pdfmark%
13316 } ?pdfmark%
13317 [%
13318 {aform}%
13319 <<%
13320 /Fields{afields}%
13321 /DR<<%
13322 /Font<<%
13323 /ZaDb{ZaDb}%
13324 /Helv{Helv}%
13325 >>%

```

```

13326 >>%
13327 /DA(/Helv 10 Tf 0 g)%
13328 /CO{corder}%
13329 \ifHy@pdfa
13330 \else
13331 \ifHyField@NeedAppearances
13332 /NeedAppearances true%
13333 \fi
13334 \fi
13335 >>%
13336 /PUT pdfmark%
13337 [%
13338 {Catalog}%
13339 <<%
13340 /AcroForm{aform}%
13341 >>%
13342 /PUT pdfmark%
13343 }}%
13344 \kvsetkeys{Form}{#1}%
13345 }
13346 \let\@endForm\ltx@empty
13347 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13348 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13349 }

13350 \newcount\HyField@AnnotCount
13351 \HyField@AnnotCount=\z@
13352 \def\HyField@AdvanceAnnotCount{%
13353 \global\advance\HyField@AnnotCount\@ne
13354 }
13355 \def\HyField@TheAnnotCount{%
13356 \the\HyField@AnnotCount
13357 }

13358 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13359 \def\HyField@AddToFields#1{%
13360 \pdfmark{%
13361 pdfmark=/APPEND,%
13362 Raw={%
13363 \string{afields\string}%
13364 \string{#1\HyField@TheAnnotCount\string}%
13365 }%
13366 }%
13367 \ifx\Fld@calculate@code\ltx@empty
13368 \else
13369 \pdfmark{%
13370 pdfmark=/APPEND,%
13371 Raw={%
13372 \string{corder\string}%
13373 \string{#1\HyField@TheAnnotCount\string}%
13374 }%
13375 }%
13376 \fi
13377 }

13378 \def\@TextField[#1]#2{% parameters, label
13379 \def\Fld@name{#2}%
13380 \let\Fld@default\ltx@empty
13381 \let\Fld@value\@empty

```



```

13382 \def\Fld@width{\DefaultWidthofText}%
13383 \def\Fld@height{%
13384   \ifFld@multiline
13385     \DefaultHeightofTextMultiline
13386   \else
13387     \DefaultHeightofText
13388   \fi
13389 }%
13390 \begingroup
13391   \expandafter\HyField@SetKeys\expandafter{%
13392     \DefaultOptionsofText,#1%
13393   }%
13394   \HyField@FlagsText
13395   \ifFld@hidden\def\Fld@width{1sp}\fi
13396   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13397   \HyField@AdvanceAnnotCount
13398   \LayoutTextField{#2}{%
13399     \leavevmode
13400     \Hy@escapeform\PDFForm@Text
13401     \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
13402       pdfmark=/ANN,%
13403       objdef=text\HyField@TheAnnotCount,%
13404       Raw={\PDFForm@Text}%
13405     }%
13406   }%
13407   \HyField@AddToFields{text}%
13408 \endgroup
13409 }
13410 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13411   \def\Fld@name{#2}%
13412   \let\Fld@default\relax
13413   \let\Fld@value\relax
13414   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13415   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13416   \begingroup
13417     \Fld@menulength=0 %
13418     \@tempdima\z@
13419     \@for\@curropt:=#3\do{%
13420       \expandafter\Fld@checkequals\@curropt==\%
13421       \Hy@StepCount\Fld@menulength
13422       \settowidth{\@tempdimb}{\@currDisplay}%
13423       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13424     }%
13425     \advance\@tempdima by 15\p@
13426     \begingroup
13427       \HyField@SetKeys{#1}%
13428     \edef\x{\endgroup
13429       \noexpand\expandafter
13430       \noexpand\HyField@SetKeys
13431       \noexpand\expandafter{%
13432         \expandafter\noexpand\cname DefaultOptionsof%
13433         \ifFld@radio
13434           Radio%
13435         \else
13436           \ifFld@combo
13437             \ifFld@popdown
13438               PopdownBox%

```

```

13439         \else
13440             ComboBox%
13441         \fi
13442     \else
13443         ListBox%
13444     \fi
13445 \fi
13446 \endcsname
13447 }%
13448 }\x
13449 \HyField@SetKeys{#1}%
13450 \ifFld@hidden\def\Fld@width{1sp}\fi
13451 \ifx\Fld@value\relax
13452     \let\Fld@value\Fld@default
13453 \fi
13454 \LayoutChoiceField{#2}{%
13455     \ifFld@radio
13456         \HyField@FlagsRadioButton
13457         \@@Radio{#3}%
13458     \else
13459         \begingroup
13460         \HyField@FlagsChoice
13461         \ifdim\Fld@width<\@tempdima
13462             \ifdim\@tempdima<1cm\@tempdima1cm\fi
13463             \edef\Fld@width{\the\@tempdima}%
13464         \fi
13465         \ifFld@combo
13466         \else
13467             \@tempdima=\the\Fld@menulength\Fld@charsize
13468             \advance\@tempdima by \Fld@borderwidth bp %
13469             \advance\@tempdima by \Fld@borderwidth bp %
13470             \edef\Fld@height{\the\@tempdima}%
13471         \fi
13472         \@@ListBox{#3}%
13473     \endgroup
13474 \fi
13475 }%
13476 \endgroup
13477 }
13478 \def\@@Radio#1{%
13479     \Fld@listcount=0 %
13480     \EdefEscapeName\Fld@default{\Fld@default}%
13481     \@for\@curropt:=#1\do{%
13482         \expandafter\Fld@checkequals\@curropt==\%
13483         \EdefEscapeName\@currValue{\@currValue}%
13484         \Hy@StepCount\Fld@listcount
13485         \@currDisplay\space
13486         \Hy@escapeform\PDFForm@Radio
13487         \ifnum\Fld@listcount=1 %
13488             \HyField@AdvanceAnnotCount
13489         \fi
13490         \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13491             pdfmark=/ANN,%
13492             objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13493             Raw={%
13494                 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13495             }%

```

```

13496 } % deliberate space between radio buttons
13497 \ifnum\Fld@listcount=1 %
13498   \HyField@AddToFields{radio}%
13499 \fi
13500 }%
13501 }
13502 \newcount\Fld@listcount
13503 \def\@@ListBox#1{%
13504   \HyField@PDFChoices{#1}%
13505   \Hy@escapeform\PDFForm@List
13506   \HyField@AdvanceAnnotCount
13507   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13508     pdfmark=/ANN,%
13509     objdef=list\HyField@TheAnnotCount,%
13510     Raw={\PDFForm@List}%
13511   }%
13512   \HyField@AddToFields{list}%
13513 }
13514 \def\@PushButton[#1]#2{% parameters, label
13515   \def\Fld@name{#2}%
13516   \begingroup
13517     \expandafter\HyField@SetKeys\expandafter{%
13518       \DefaultOptionsofPushButton,#1%
13519     }%
13520     \ifHy@pdfa
13521       \Hy@Error{%
13522         PDF/A: Push button with JavaScript is prohibited%
13523       }\@ehc
13524       \LayoutPushButtonField{%
13525         \leavevmode
13526         \MakeButtonField{#2}%
13527       }%
13528     \else
13529       \HyField@FlagsPushButton
13530       \ifFld@hidden\def\Fld@width{1sp}\fi
13531       \HyField@AdvanceAnnotCount
13532       \LayoutPushButtonField{%
13533         \leavevmode
13534         \Hy@escapeform\PDFForm@Push
13535         \pdfmark[\MakeButtonField{#2}]{%
13536           pdfmark=/ANN,%
13537           objdef=push\HyField@TheAnnotCount,%
13538           Raw={\PDFForm@Push}%
13539         }%
13540       }%
13541       \HyField@AddToFields{push}%
13542     \fi
13543   \endgroup
13544 }
13545 \def\@Submit[#1]#2{%
13546   \def\Fld@width{\DefaultWidthofSubmit}%
13547   \def\Fld@height{\DefaultHeightofSubmit}%
13548   \begingroup
13549     \expandafter\HyField@SetKeys\expandafter{%
13550       \DefaultOptionsofSubmit,#1%
13551     }%
13552     \HyField@FlagsPushButton

```

```

13553 \HyField@FlagsSubmit
13554 \ifFld@hidden\def\Fld@width{1sp}\fi
13555 \Hy@escapeform\PDFForm@Submit
13556 \HyField@AdvanceAnnotCount
13557 \pdfmark[\MakeButtonField{#2}]{%
13558 pdfmark=/ANN,%
13559 objdef=submit\HyField@TheAnnotCount,%
13560 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
13561 }%
13562 \HyField@AddToFields{submit}%
13563 \endgroup
13564 }
13565 \def\@Reset[#1]#2{%
13566 \def\Fld@width{\DefaultWidthofReset}%
13567 \def\Fld@height{\DefaultHeightofReset}%
13568 \begingroup
13569 \expandafter\HyField@SetKeys\expandafter{%
13570 \DefaultOptionsofReset,#1%
13571 }%
13572 \leavevmode
13573 \ifHy@pdfa
13574 \Hy@Error{%
13575 PDF/A: Reset action is prohibited%
13576 }\@ehc
13577 \MakeButtonField{#2}%
13578 \else
13579 \HyField@FlagsPushButton
13580 \ifFld@hidden\def\Fld@width{1sp}\fi
13581 \Hy@escapeform\PDFForm@Reset
13582 \HyField@AdvanceAnnotCount
13583 \pdfmark[\MakeButtonField{#2}]{%
13584 pdfmark=/ANN,%
13585 objdef=reset\HyField@TheAnnotCount,%
13586 Raw={\PDFForm@Reset}%
13587 }%
13588 \HyField@AddToFields{reset}%
13589 \fi
13590 \endgroup
13591 }%
13592 \def\@CheckBox[#1]#2{% parameters, label
13593 \def\Fld@name{#2}%
13594 \def\Fld@default{0}%
13595 \begingroup
13596 \def\Fld@width{\DefaultWidthofCheckBox}%
13597 \def\Fld@height{\DefaultHeightofCheckBox}%
13598 \expandafter\HyField@SetKeys\expandafter{%
13599 \DefaultOptionsofCheckBox,#1%
13600 }%
13601 \HyField@FlagsCheckBox
13602 \ifFld@hidden\def\Fld@width{1sp}\fi
13603 \HyField@AdvanceAnnotCount
13604 \LayoutCheckField{#2}{%
13605 \leavevmode
13606 \Hy@escapeform\PDFForm@Check
13607 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13608 pdfmark=/ANN,%
13609 objdef=check\HyField@TheAnnotCount,%

```

```

13610     Raw={\PDFForm@Check}%
13611     }%
13612 }%
13613   \HyField@AddToFields{check}%
13614 \endgroup
13615 }
13616 \pdfmark

```

48.2 HyperTeX

```

13617 \hypertex
13618 \def\@Form[#1]{%
13619   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13620 }
13621 \let\@endForm\ltx@empty
13622 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13623   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13624 }
13625 \def\@TextField[#1]#2{% parameters, label
13626   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13627 }
13628 \def\@CheckBox[#1]#2{% parameters, label
13629   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13630 }
13631 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13632   \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13633 }
13634 \def\@PushButton[#1]#2{% parameters, label
13635   \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13636 }
13637 \def\@Reset[#1]#2{%
13638   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13639 }
13640 \def\@Submit[#1]#2{%
13641   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13642 }
13643 \hypertex

```

48.3 TeX4ht

```

13644 \tex4ht
13645 \def\@Form[#1]{%
13646   \kvsetkeys{Form}{#1}%
13647   \HCode{<form action="\Form@action" method="\Form@method">}%
13648 }
13649 \def\@endForm{\HCode{</form>}}
13650 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13651   \Hy@Message{Sorry, TeX4ht does not support gauges}%
13652 }
13653 \def\@TextField[#1]#2{% parameters, label
13654   \let\Hy@reserved@a\@empty
13655   \def\Fld@name{#2}%
13656   \let\Fld@default\ltx@empty
13657   \bgroup
13658     \Field@toks={ }%
13659     \kvsetkeys{Field}{#1}%
13660     \HCode{<label for="\Fld@name">#2</label>}%
13661     \ifFld@password
13662       \@@PasswordField

```

```

13663 \else
13664 \@@TextField
13665 \fi
13666 \egroup
13667 }
13668 \def\@@PasswordField{%
13669 \HCode{%
13670 <input type="password" %
13671 id="\Fld@name" %
13672 name="\Fld@name" %
13673 \ifFld@hidden type="hidden" \fi
13674 value="\Fld@default" %
13675 \the\Field@toks
13676 >%
13677 }%
13678 }
13679 \def\@@TextField{%
13680 \ifFld@multiline
13681 \HCode{<textarea %
13682 \ifFld@readonly readonly \fi
13683 id="\Fld@name" %
13684 name="\Fld@name" %
13685 \ifFld@hidden type="hidden" \fi
13686 \the\Field@toks>%
13687 }%
13688 \Fld@default
13689 \HCode{</textarea>}%
13690 \else
13691 \HCode{<input type="text" %
13692 \ifFld@readonly readonly \fi
13693 id="\Fld@name" %
13694 name="\Fld@name" %
13695 \ifFld@hidden type="hidden" \fi
13696 value="\Fld@default" %
13697 \the\Field@toks>%
13698 }%
13699 \fi
13700 }
13701 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13702 \def\Fld@name{#2}%
13703 \let\Fld@default\ltx@empty
13704 \let\Hy@reserved@a\relax
13705 \begingroup
13706 \expandafter\Fld@findlength#3\\%
13707 \Field@toks={ }%
13708 \kvsetkeys{Field}{#1}%
13709 #2%
13710 \ifFld@radio
13711 \expandafter\@@Radio#3\\%
13712 \else
13713 \expandafter\@@Menu#3\\%
13714 \fi
13715 \endgroup
13716 }
13717 \def\Fld@findlength#1\\{%
13718 \Fld@menulength=0 %
13719 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%

```

```

13720 }
13721 \def\@@Menu#1\{\{%
13722 \HCode{<select size="\the\Fld@menulength" %
13723   name="\Fld@name" %
13724   \the\Field@toks>%
13725 }%
13726 \@for\@curropt:=#1\do{%
13727   \expandafter\Fld@checkequals\@curropt==\%
13728   \HCode{<option %
13729     \ifx\@curropt\Fld@default selected \fi
13730     value="\@currValue">\@currDisplay</option>%
13731   }%
13732 }%
13733 \HCode{</select>}%
13734 }
13735 \def\@@Radio#1\{\{%
13736 \@for\@curropt:=#1\do{%
13737   \expandafter\Fld@checkequals\@curropt==\%
13738   \HCode{<input type="radio" %
13739     \ifx\@curropt\Fld@default checked \fi
13740     name="\Fld@name" %
13741     value="\@currValue" %
13742     \the\Field@toks>%
13743   }%
13744   \@currDisplay
13745 }%
13746 }
13747 \def\@PushButton[#1]#2{% parameters, label
13748 \def\Fld@name{#2}%
13749 \bgroup
13750 \Field@toks={ }%
13751 \kvsetkeys{Field}{#1}%
13752 \HCode{<input type="button" %
13753   name="\Fld@name" %
13754   value="#2" %
13755   \the\Field@toks>%
13756 }%
13757 \HCode{</button>}%
13758 \egroup
13759 }
13760 \def\@Submit[#1]#2{%
13761 \HCode{<button type="submit">#2</button>}%
13762 }
13763 \def\@Reset[#1]#2{%
13764 \HCode{<button type="reset">#2</button>}%
13765 }
13766 \def\@CheckBox[#1]#2{% parameters, label
13767 \let\Hy@reserved@a\@empty
13768 \def\Fld@name{#2}%
13769 \def\Fld@default{0}%
13770 \bgroup
13771 \Field@toks={ }%
13772 \kvsetkeys{Field}{#1}%
13773 \HCode{<input type="checkbox" %
13774   \ifFld@checked checked \fi
13775   \ifFld@disabled disabled \fi
13776   \ifFld@readonly readonly \fi

```

```

13777     name="\Fld@name" %
13778     \iffld@hidden type="hidden" \fi
13779     value="\Fld@default" %
13780     \the\Fld@toks>%
13781     #2%
13782   }%
13783 \egroup
13784 }
13785 </tex4ht>

```

48.4 pdfTeX

```

13786 (*pdfTeX)
13787 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13788   \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13789 }
13790 \def\MakeFieldObject#1#2{\sbox0{#1}%
13791   \immediate\pdfxform0 %
13792   \expandafter\edef\csname #2Object\endcsname{%
13793     \the\pdfastxform\space 0 R%
13794   }%
13795 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%
13796 }%
13797 \let\HyField@afields\ltx@empty
13798 \let\HyField@cofields\ltx@empty
13799 \begingroup\expandafter\expandafter\expandafter\endgroup
13800 \expandafter\ifx\csname pdfastlink\endcsname\relax
13801   \let\HyField@AddToFields\relax
13802   \PackageInfo{hyperref}{%
13803     You need pdfTeX 1.40.0 for setting the /Fields entry.%
13804     \MessageBreak
13805     Adobe Reader/Acrobat accepts an empty /Field array,%
13806     \MessageBreak
13807     but other PDF viewers might complain%
13808   }%
13809 \else
13810   \let\HyField@AuxAddToFields\ltx@gobble
13811   \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13812   \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.

```

13813 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13814   \begingroup
13815     \Hy@safe@activetrue
13816     \let\ltx@secondoftwo\relax
13817     \ifx\HyField@cofields\ltx@empty
13818       \xdef\HyField@cofields{%
13819         \ltx@secondoftwo{#1}{ #2 0 R}%
13820       }%
13821     \else
13822       \let\ltx@secondoftwo\relax
13823       \def\HyField@AddCoField##1##2##3{%
13824         \ifx##1\ltx@empty
13825           \ltx@secondoftwo{#1}{ #2 0 R}%
13826         \expandafter\ltx@gobble
13827       \else
13828         \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13829           \ltx@secondoftwo{#1}{ #2 0 R}%

```



```

13830         \ltx@secondoftwo{##2}{##3}%
13831         \expandafter\expandafter\expandafter\ltx@gobble
13832     \else
13833         \ltx@secondoftwo{##2}{##3}%
13834     \fi
13835 \fi
13836 \HyField@AddCoField
13837 }%
13838 \xdef\HyField@cofields{%
13839     \expandafter\HyField@AddCoField
13840     \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13841 }%
13842 \fi
13843 \endgroup
13844 }%
13845 \Hy@AtBeginDocument{%
13846     \if@filesw
13847         \immediate\write\@mainaux{%
13848             \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13849         }%
13850         \immediate\write\@mainaux{%
13851             \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13852         }%
13853     \fi
13854     \let\HyField@AfterAuxOpen\@firstofone
13855     \def\HyField@AuxAddToFields#1{%
13856         \xdef\HyField@afields{%
13857             \ifx\HyField@afields\@empty
13858             \else
13859                 \HyField@afields
13860             \space
13861             \fi
13862             #1 0 R%
13863         }%
13864     }%
13865     \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13866 }%
13867 \def\HyField@AddToFields{%
13868     \expandafter\HyField@@AddToFields\expandafter{%
13869         \the\pdfastlink
13870     }%
13871     \ifx\Fld@calculate@code\ltx@empty
13872     \else
13873         \begingroup
13874         \Hy@safe@activestruer
13875         \edef\Hy@temp{%
13876             \endgroup
13877             \if@filesw
13878                 \write\@mainaux{%
13879                     \string\HyField@AuxAddToCoFields{%
13880                         \Fld@calculate@sortkey
13881                     }{%
13882                         \the\pdfastlink
13883                     }%
13884                 }%
13885             \fi
13886         }%

```

```

13887 \Hy@temp
13888 \fi
13889 }%
13890 \def\HyField@@AddToFields#1{%
13891 \HyField@AfterAuxOpen{%
13892 \if@filesw
13893 \write\@mainaux{%
13894 \string\HyField@AuxAddToFields{#1}%
13895 }%
13896 \fi
13897 }%
13898 }%
13899 \fi
13900 \def\@Form[#1]{%
13901 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13902 \kvsetkeys{Form}{#1}%
13903 \pdf@ifdraftmode{}{%
13904 \Hy@FormObjects
13905 \ifnum\pdfTeXversion>13 %
13906 \pdfrefobj\OBJ@pdfdocencoding
13907 \pdfrefobj\OBJ@ZaDb
13908 \pdfrefobj\OBJ@Helv
13909 \fi
13910 \AtVeryEndDocument{%
13911 \immediate\pdfobj{%
13912 <<%
13913 /Fields[\HyField@afields]%
13914 \ifx\HyField@cofields\ltx@empty
13915 \else
13916 /CO[\romannumeral-`\Q\HyField@cofields]%
13917 \fi
13918 /DR<<%
13919 /Font<<%
13920 /ZaDb \OBJ@ZaDb\space 0 R%
13921 /Helv \OBJ@Helv\space 0 R%
13922 >>%
13923 >>%
13924 /DA(/Helv 10 Tf 0 g)%
13925 \ifHy@pdfa
13926 \else
13927 \ifHyField@NeedAppearances
13928 /NeedAppearances true%
13929 \fi
13930 \fi
13931 >>%
13932 }%
13933 \edef\OBJ@acroform{\the\pdfflastobj}%
13934 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13935 }%
13936 }%
13937 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13938 \begingroup
13939 \fontfamily{pzd}%
13940 \fontencoding{U}%
13941 \fontseries{m}%
13942 \fontshape{n}%

```

```

13943 \selectfont
13944 \char123 %
13945 \endgroup
13946 }{Ding}%
13947 \MakeFieldObject{%
13948 \fbox{\textcolor{yellow}{\textsf{Submit}}}}%
13949 }{Submit}%
13950 \MakeFieldObject{%
13951 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}}%
13952 }{SubmitP}%
13953 }
13954 \let\@endForm\ltx@empty
13955 \let\HyAnn@AbsPageLabel\ltx@empty
13956 \let\Fld@pageobjref\ltx@empty
13957 \ltx@ifundefined{pdfpageref}{%
13958 }{%
13959 \ltx@ifpackageloaded{zref-abspage}{%
13960 \newcount\HyAnn@Count
13961 \HyAnn@Count=\ltx@zero
13962 \def\HyAnn@AbsPageLabel{%
13963 \global\advance\HyAnn@Count by\ltx@one
13964 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13965 \zref@refused{HyAnn@\the\HyAnn@Count}%
13966 }%
13967 \def\Fld@pageobjref{%
13968 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13969 }{%
13970 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13971 /P \pdfpageref
13972 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13973 \space 0 R%
13974 }{%
13975 }%
13976 }%
13977 }%
13978 }{%
13979 }%
13980 }
13981 \def\@TextField[#1]#2{% parameters, label
13982 \def\Fld@name{#2}%
13983 \let\Fld@default\ltx@empty
13984 \let\Fld@value\@empty
13985 \def\Fld@width{\DefaultWidthofText}%
13986 \def\Fld@height{%
13987 \ifFld@multiline
13988 \DefaultHeightofTextMultiline
13989 \else
13990 \DefaultHeightofText
13991 \fi
13992 }%
13993 \begingroup
13994 \expandafter\HyField@SetKeys\expandafter{%
13995 \DefaultOptionsofText,#1%
13996 }%
13997 \PDFForm@Name
13998 \HyField@FlagsText
13999 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

14000 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14001 \LayoutTextField{#2}{%
14002 \leavevmode
14003 \HyAnn@AbsPageLabel
14004 \Hy@escapeform\PDFForm@Text
14005 \pdfstartlink user {\PDFForm@Text}\relax
14006 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14007 \HyField@AddToFields
14008 }%
14009 \endgroup
14010 }
14011 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14012 \def\Fld@name{#2}%
14013 \let\Fld@default\relax
14014 \let\Fld@value\relax
14015 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14016 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14017 \begingroup
14018 \Fld@menulength=0 %
14019 \@tempdima\z@
14020 \@for\@curropt:=#3\do{%
14021 \expandafter\Fld@checkequals\@curropt==\%
14022 \Hy@StepCount\Fld@menulength
14023 \settowidth{\@tempdimb}{\@currDisplay}%
14024 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14025 }%
14026 \advance\@tempdima by 15\p@
14027 \begingroup
14028 \HyField@SetKeys{#1}%
14029 \edef\x{\endgroup
14030 \noexpand\expandafter
14031 \noexpand\HyField@SetKeys
14032 \noexpand\expandafter{%
14033 \expandafter\noexpand\cname DefaultOptionsof%
14034 \ifFld@radio
14035 Radio%
14036 \else
14037 \ifFld@combo
14038 \ifFld@popdown
14039 PopdownBox%
14040 \else
14041 ComboBox%
14042 \fi
14043 \else
14044 ListBox%
14045 \fi
14046 \fi
14047 \endcsname
14048 }%
14049 }\x
14050 \HyField@SetKeys{#1}%
14051 \PDFForm@Name
14052 \ifFld@hidden\def\Fld@width{1sp}\fi
14053 \ifx\Fld@value\relax
14054 \let\Fld@value\Fld@default
14055 \fi
14056 \LayoutChoiceField{#2}{%

```

```

14057 \ifFld@radio
14058 \HyField@FlagsRadioButton
14059 \@@Radio{#3}%
14060 \else
14061 \begingroup
14062 \HyField@FlagsChoice
14063 \ifdim\Fld@width<\@tempdima
14064 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14065 \edef\Fld@width{\the\@tempdima}%
14066 \fi
14067 \ifFld@combo
14068 \else
14069 \@tempdima=\the\Fld@menulength\Fld@charsize
14070 \advance\@tempdima by \Fld@borderwidth bp %
14071 \advance\@tempdima by \Fld@borderwidth bp %
14072 \edef\Fld@height{\the\@tempdima}%
14073 \fi
14074 \@@ListBox{#3}%
14075 \endgroup
14076 \fi
14077 }%
14078 \endgroup
14079 }
14080 \def\@@Radio#1{%
14081 \Fld@listcount=0 %
14082 \EdefEscapeName\Fld@default{\Fld@default}%
14083 \@for\@curropt:=#1\do{%
14084 \expandafter\Fld@checkequals\@curropt==\%
14085 \EdefEscapeName\@currValue{\@currValue}%
14086 \Hy@StepCount\Fld@listcount
14087 \@currDisplay\space
14088 \leavevmode
14089 \HyAnn@AbsPageLabel
14090 \Hy@escapeform\PDFForm@Radio
14091 \pdfstartlink user {%
14092 \PDFForm@Radio
14093 /AP<<%
14094 /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.

```

14095 /\@currValue\space \DingObject
14096 >>%
14097 >>%
14098 }%
14099 \relax
14100 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14101 \ifnum\Fld@listcount=1 %
14102 \HyField@AddToFields
14103 \fi
14104 \space % deliberate space between radio buttons
14105 }%
14106 }
14107 \newcount\Fld@listcount
14108 \def\@@ListBox#1{%
14109 \HyField@PDFChoices{#1}%
14110 \leavevmode

```

```

14111 \HyAnn@AbsPageLabel
14112 \Hy@escapeform\PDFForm@List
14113 \pdfstartlink user {\PDFForm@List}\relax
14114 \MakeChoiceField{\Fld@width}{\Fld@height}%
14115 \pdfendlink
14116 \HyField@AddToFields
14117 }
14118 \def\@PushButton[#1]#2{% parameters, label
14119 \def\Fld@name{#2}%
14120 \begingroup
14121 \expandafter\HyField@SetKeys\expandafter{%
14122 \DefaultOptionsofPushButton,#1%
14123 }%
14124 \PDFForm@Name
14125 \ifHy@pdfa
14126 \Hy@Error{%
14127 PDF/A: Push button with JavaScript is prohibited%
14128 } \@ehc
14129 \LayoutPushButtonField{%
14130 \leavevmode
14131 \MakeButtonField{#2}%
14132 }%
14133 \else
14134 \HyField@FlagsPushButton
14135 \ifFld@hidden\def\Fld@width{1sp}\fi
14136 \LayoutPushButtonField{%
14137 \leavevmode
14138 \HyAnn@AbsPageLabel
14139 \Hy@escapeform\PDFForm@Push
14140 \pdfstartlink user {\PDFForm@Push}\relax
14141 \MakeButtonField{#2}%
14142 \pdfendlink
14143 \HyField@AddToFields
14144 }%
14145 \fi
14146 \endgroup
14147 }
14148 \def\@Submit[#1]#2{%
14149 \def\Fld@width{\DefaultWidthofSubmit}%
14150 \def\Fld@height{\DefaultHeightofSubmit}%
14151 \begingroup
14152 \expandafter\HyField@SetKeys\expandafter{%
14153 \DefaultOptionsofSubmit,#1%
14154 }%
14155 \HyField@FlagsPushButton
14156 \HyField@FlagsSubmit
14157 \ifFld@hidden\def\Fld@width{1sp}\fi
14158 \leavevmode
14159 \HyAnn@AbsPageLabel
14160 \Hy@escapeform\PDFForm@Submit
14161 \pdfstartlink user {%
14162 \PDFForm@Submit
14163 /AP<</N \SubmitObject/D \SubmitPObject>>%
14164 }%
14165 \relax
14166 \MakeButtonField{#2}%
14167 \pdfendlink

```

```

14168 \HyField@AddToFields
14169 \endgroup
14170 }
14171 \def\@Reset[#1]#2{%
14172 \def\Fld@width{\DefaultWidthofReset}%
14173 \def\Fld@height{\DefaultHeightofReset}%
14174 \begingroup
14175 \expandafter\HyField@SetKeys\expandafter{%
14176 \DefaultOptionsofReset,#1%
14177 }%
14178 \leavevmode
14179 \ifHy@pdfa
14180 \Hy@Error{%
14181 PDF/A: Reset action is prohibited%
14182 }\@ehc
14183 \MakeButtonField{#2}%
14184 \else
14185 \HyField@FlagsPushButton
14186 \ifFld@hidden\def\Fld@width{1sp}\fi
14187 \HyAnn@AbsPageLabel
14188 \Hy@escapeform\PDFForm@Reset
14189 \pdfstartlink user {\PDFForm@Reset}\relax
14190 \MakeButtonField{#2}%
14191 \pdfendlink
14192 \HyField@AddToFields
14193 \fi
14194 \endgroup
14195 }
14196 \def\@CheckBox[#1]#2{% parameters, label
14197 \def\Fld@name{#2}%
14198 \def\Fld@default{0}%
14199 \begingroup
14200 \def\Fld@width{\DefaultWidthofCheckBox}%
14201 \def\Fld@height{\DefaultHeightofCheckBox}%
14202 \expandafter\HyField@SetKeys\expandafter{%
14203 \DefaultOptionsofCheckBox,#1%
14204 }%
14205 \PDFForm@Name
14206 \HyField@FlagsCheckBox
14207 \ifFld@hidden\def\Fld@width{1sp}\fi
14208 \LayoutCheckField{#2}{%
14209 \leavevmode
14210 \HyAnn@AbsPageLabel
14211 \Hy@escapeform\PDFForm@Check
14212 \pdfstartlink user {\PDFForm@Check}\relax
14213 \MakeCheckField{\Fld@width}{\Fld@height}%
14214 \pdfendlink
14215 \HyField@AddToFields
14216 }%
14217 \endgroup
14218 }
14219 \def\Hy@FormObjects{%
14220 \pdfobj {%
14221 <<%
14222 /Type/Encoding%
14223 /Differences[%
14224 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%

```

```

14225      /ring/tilde %
14226      39/quotesingle %
14227      96/grave %
14228      128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14229      /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14230      /quotedblbase/quotedblleft/quotedblright/quoteleft%
14231      /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14232      /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14233      164/currency %
14234      166/brokenbar %
14235      168/dieresis/copyright/ordfeminine %
14236      172/logicalnot/.notdef/registered/macron/degree/plusminus%
14237      /twosuperior/threesuperior/acute/mu %
14238      183/periodcentered/cedilla/onesuperior/ordmasculine %
14239      188/onequarter/onehalf/threequarters %
14240      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14241      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14242      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14243      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14244      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14245      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14246      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14247      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14248      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
14249      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14250      ]%
14251      >>%
14252      }%
14253      \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
14254      \pdfobj{%
14255      <<%
14256      /Type/Font%
14257      /Subtype/Type1%
14258      /Name/ZaDb%
14259      /BaseFont/ZapfDingbats%
14260      >>%
14261      }%
14262      \xdef\OBJ@ZaDb{\the\pdfastobj}%
14263      \pdfobj{%
14264      <<%
14265      /Type/Font%
14266      /Subtype/Type1%
14267      /Name/Helv%
14268      /BaseFont/Helvetica%
14269      /Encoding \OBJ@pdfdocencoding\space 0 R%
14270      >>%
14271      }%
14272      \xdef\OBJ@Helv{\the\pdfastobj}%
14273      \global\let\Hy@FormObjects\relax
14274      }
14275      \pdfTeX

```

48.5 dvipdfm, xetex

D. P. Story adapted the pdf \TeX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

14276      (*dvipdfm | xetex)

```


\@Gauge

```
14277 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14278 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14279 }
```

\@Form

```
14280 \def\@Form[#1]{%
14281 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14282 \kvsetkeys{Form}{#1}%
14283 \Hy@FormObjects
14284 \@pdfm@mark{obj @afields []}%
14285 \@pdfm@mark{obj @corder []}%
14286 \@pdfm@mark{%
14287 obj @aform <<%
14288 /Fields @afields%
14289 /DR<<%
14290 /Font<<%
14291 /ZaDb @OBJZaDb%
14292 /Helv @OBJHelv%
14293 >>%
14294 >>%
14295 /DA(/Helv 10 Tf 0 g)%
14296 /CO @corder%
14297 \ifHy@pdfa
14298 \else
14299 \ifHyField@NeedAppearances
14300 /NeedAppearances true%
14301 \fi
14302 \fi
14303 >>%
14304 }%
14305 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14306 }
```

\@endForm

```
14307 \let\@endForm\ltx@empty
```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```
14308 \def\dvipdfm@setdim{%
14309 height \the\ht\pdfm@box\space
14310 width \the\wd\pdfm@box\space
14311 depth \the\dp\pdfm@box\space
14312 }
```

\HyField@AnnotCount

```
14313 \newcount\HyField@AnnotCount
14314 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
14315 \def\HyField@AdvanceAnnotCount{%
14316 \global\advance\HyField@AnnotCount\@ne
14317 }
```

\HyField@TheAnnotCount

```
14318 \def\HyField@TheAnnotCount{%
14319 \the\HyField@AnnotCount
14320 }
```

\Fld@pageobjref

```
14321 \def\Fld@pageobjref{/P @thispage}%
```

\HyField@AddToFields

```
14322 \def\HyField@AddToFields#1{%
14323   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14324   \ifx\Fld@calculate@code\ltx@empty
14325   \else
14326     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14327   \fi
14328 }
```

\@TextField

```
14329 \def\@TextField[#1]#2{% parameters, label
14330   \def\Fld@name{#2}%
14331   \let\Fld@default\ltx@empty
14332   \let\Fld@value\@empty
14333   \def\Fld@width{\DefaultWidthofText}%
14334   \def\Fld@height{%
14335     \ifFld@multiline
14336       \DefaultHeightofTextMultiline
14337     \else
14338       \DefaultHeightofText
14339     \fi
14340   }%
14341   \begingroup
14342     \expandafter\HyField@SetKeys\expandafter{%
14343       \DefaultOptionsofText,#1%
14344     }%
14345     \PDFForm@Name
14346     \HyField@FlagsText
14347     \ifFld@hidden\def\Fld@width{1sp}\fi
14348     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14349     \setbox\pdfm@box=\hbox{%
14350       \MakeTextField{\Fld@width}{\Fld@height}%
14351     }%
14352     \HyField@AdvanceAnnotCount
14353     \LayoutTextField{#2}{%
14354       \leavevmode
14355       \Hy@escapeform\PDFForm@Text
14356       \@pdfm@mark{%
14357         ann @text\HyField@TheAnnotCount\space
14358         \dvipdfm@setdim << \PDFForm@Text >>%
14359       }%
14360     }%
14361     \unhbox\pdfm@box
14362     \HyField@AddToFields{text}%
14363     % record in @afields array
14364   \endgroup
14365 }
```

\@ChoiceMenu

```
14366 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14367   \def\Fld@name{#2}%
14368   \let\Fld@default\relax
14369   \let\Fld@value\relax
14370   \def\Fld@width{\DefaultWidthofChoiceMenu}%
```

```

14371 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14372 \begingroup
14373 \Fld@menulength=0 %
14374 \@tempdima\z@
14375 \@for\@curropt:=#3\do{%
14376 \expandafter\Fld@checkequals\@curropt==\\%
14377 \Hy@StepCount\Fld@menulength
14378 \settowidth{\@tempdimb}{\@currDisplay}%
14379 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14380 }%
14381 \advance\@tempdima by 15\p@
14382 \begingroup
14383 \HyField@SetKeys{#1}%
14384 \edef\x{\endgroup
14385 \noexpand\expandafter
14386 \noexpand\HyField@SetKeys
14387 \noexpand\expandafter{%
14388 \expandafter\noexpand\csname DefaultOptionsof%
14389 \ifFld@radio
14390 Radio%
14391 \else
14392 \ifFld@combo
14393 \ifFld@popdown
14394 PopdownBox%
14395 \else
14396 ComboBox%
14397 \fi
14398 \else
14399 ListBox%
14400 \fi
14401 \fi
14402 \endcsname
14403 }%
14404 }\x
14405 \HyField@SetKeys{#1}%
14406 \PDFForm@Name
14407 \ifFld@hidden\def\Fld@width{1sp}\fi
14408 \ifx\Fld@value\relax
14409 \let\Fld@value\Fld@default
14410 \fi
14411 \LayoutChoiceField{#2}{%
14412 \ifFld@radio
14413 \HyField@FlagsRadioButton
14414 \@@Radio{#3}%
14415 \else
14416 \begingroup
14417 \HyField@FlagsChoice
14418 \ifdim\Fld@width<\@tempdima
14419 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14420 \edef\Fld@width{\the\@tempdima}%
14421 \fi
14422 \ifFld@combo
14423 \else
14424 \@tempdima=\the\Fld@menulength\Fld@charsize
14425 \advance\@tempdima by \Fld@borderwidth bp %
14426 \advance\@tempdima by \Fld@borderwidth bp %
14427 \edef\Fld@height{\the\@tempdima}%

```

```

14428         \fi
14429         \@@ListBox{#3}%
14430     \endgroup
14431     \fi
14432 }%
14433 \endgroup
14434 }

\@@Radio

14435 \def\@@Radio#1{%
14436     \Fld@listcount=0 %
14437     \EdefEscapeName\Fld@default{\Fld@default}%
14438     \setbox\pdfm@box=\hbox{%
14439         \MakeRadioField{\Fld@width}{\Fld@height}%
14440     }%
14441     \@for\@curropt:=#1\do{%
14442         \expandafter\Fld@checkequals\@curropt==\%
14443         \EdefEscapeName\@currValue{\@currValue}%
14444         \Hy@StepCount\Fld@listcount
14445         \@currDisplay\space
14446         \leavevmode
14447         \Hy@escapeform\PDFForm@Radio
14448         \ifnum\Fld@listcount=1 %
14449             \HyField@AdvanceAnnotCount
14450             \fi
14451             \@pdfm@mark{%
14452                 ann %
14453                 \ifnum\Fld@listcount=1 %
14454                     @radio\HyField@TheAnnotCount%
14455                     \space
14456                 \fi
14457                 \dvipdfm@setdim
14458                 <<%
14459                 \PDFForm@Radio
14460                 /AP<</N<</\@currValue /null>>>>%
14461                 >>%
14462             }%
14463             \unhcopy\pdfm@box\space% deliberate space between radio buttons
14464             \ifnum\Fld@listcount=1 %
14465                 \HyField@AddToFields{radio}%
14466             \fi
14467         }%
14468     }

\Fld@listcount

14469 \newcount\Fld@listcount

\@@ListBox

14470 \def\@@ListBox#1{%
14471     \HyField@PDFChoices{#1}%
14472     \setbox\pdfm@box=\hbox{%
14473         \MakeChoiceField{\Fld@width}{\Fld@height}%
14474     }%
14475     \leavevmode
14476     \Hy@escapeform\PDFForm@List
14477     \HyField@AdvanceAnnotCount
14478     \@pdfm@mark{%

```

```

14479 ann @list\HyField@TheAnnotCount\space
14480 \dvipdfm@setdim
14481 <<\PDFForm@List>>%
14482 }%
14483 \unhbox\pdfm@box
14484 \HyField@AddToFields{list}%
14485 }

```

\@PushButton

```

14486 \def\@PushButton[#1]#2{% parameters, label
14487 \def\Fld@name{#2}%
14488 \begingroup
14489 \expandafter\HyField@SetKeys\expandafter{%
14490 \DefaultOptionsofPushButton,#1%
14491 }%
14492 \PDFForm@Name
14493 \ifHy@pdfa
14494 \Hy@Error{%
14495 PDF/A: Push button with JavaScript is prohibited%
14496 } \@ehc
14497 \LayoutPushButtonField{%
14498 \leavevmode
14499 \MakeButtonField{#2}%
14500 }%
14501 \else
14502 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14503 \HyField@FlagsPushButton
14504 \ifFld@hidden\def\Fld@width{1sp}\fi
14505 \HyField@AdvanceAnnotCount
14506 \LayoutPushButtonField{%
14507 \leavevmode
14508 \Hy@escapeform\PDFForm@Push
14509 \@pdfm@mark{%
14510 ann @push\HyField@TheAnnotCount\space
14511 \dvipdfm@setdim
14512 <<\PDFForm@Push>>%
14513 }%
14514 }%
14515 \unhbox\pdfm@box
14516 \HyField@AddToFields{push}%
14517 \fi
14518 \endgroup
14519 }

```

\@Submit

```

14520 \def\@Submit[#1]#2{%
14521 \def\Fld@width{\DefaultWidthofSubmit}%
14522 \def\Fld@height{\DefaultHeightofSubmit}%
14523 \begingroup
14524 \expandafter\HyField@SetKeys\expandafter{%
14525 \DefaultOptionsofSubmit,#1%
14526 }%
14527 \HyField@FlagsPushButton
14528 \HyField@FlagsSubmit
14529 \ifFld@hidden\def\Fld@width{1sp}\fi
14530 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14531 \leavevmode

```

```

14532 \Hy@escapeform\PDFForm@Submit
14533 \HyField@AdvanceAnnotCount
14534 \@pdfm@mark{%
14535     ann @submit\HyField@TheAnnotCount\space
14536     \dvipdfm@setdim
14537     <<\PDFForm@Submit>>%
14538 }%
14539 \unhbox\pdfm@box%
14540 \HyField@AddToFields{submit}%
14541 \endgroup
14542 }

```

\@Reset

```

14543 \def\@Reset[#1]#2{%
14544     \def\Fld@width{\DefaultWidthofReset}%
14545     \def\Fld@height{\DefaultHeightofReset}%
14546     \begingroup
14547     \expandafter\HyField@SetKeys\expandafter{%
14548         \DefaultOptionsofReset,#1%
14549     }%
14550     \leavevmode
14551     \ifHy@pdfa
14552         \Hy@Error{%
14553             PDF/A: Reset action is prohibited%
14554         }\@ehc
14555         \MakeButtonField{#2}%
14556     \else
14557         \HyField@FlagsPushButton
14558         \ifFld@hidden\def\Fld@width{1sp}\fi
14559         \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14560         \Hy@escapeform\PDFForm@Reset
14561         \HyField@AdvanceAnnotCount
14562         \@pdfm@mark{%
14563             ann @reset\HyField@TheAnnotCount\space
14564             \dvipdfm@setdim
14565             <<\PDFForm@Reset>>%
14566         }%
14567         \unhbox\pdfm@box
14568         \HyField@AddToFields{reset}%
14569     \fi
14570 \endgroup
14571 }

```

\@CheckBox

```

14572 \def\@CheckBox[#1]#2{% parameters, label
14573     \def\Fld@name{#2}%
14574     \def\Fld@default{0}%
14575     \begingroup
14576     \def\Fld@width{\DefaultWidthofCheckBox}%
14577     \def\Fld@height{\DefaultHeightofCheckBox}%
14578     \expandafter\HyField@SetKeys\expandafter{%
14579         \DefaultOptionsofCheckBox,#1%
14580     }%
14581     \PDFForm@Name
14582     \HyField@FlagsCheckBox
14583     \ifFld@hidden\def\Fld@width{1sp}\fi
14584     \setbox\pdfm@box=\hbox{%

```

```

14585     \MakeCheckField{\Fld@width}{\Fld@height}%
14586 }%
14587 \HyField@AdvanceAnnotCount
14588 \LayoutCheckField{#2}{%
14589     \leavevmode
14590     \Hy@escapeform\PDFForm@Check
14591     \@pdfm@mark{%
14592         ann @check\HyField@TheAnnotCount\space
14593         \dvipdfm@setdim
14594         <<\PDFForm@Check>>%
14595     }%
14596     \unhbox\pdfm@box
14597     \HyField@AddToFields{check}%
14598 }%
14599 \endgroup
14600 }

14601 \def\Hy@FormObjects{%
14602     \@pdfm@mark{obj @OBJpdfdocencoding%
14603     <<%
14604         /Type/Encoding%
14605         /Differences[
14606             24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14607             39/quotesingle %
14608             96/grave %
14609             128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14610             /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14611             /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14612             /quotesinglbase/trademark/fl/fl/Lslash/OE/Scaron/Ydieresis%
14613             /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14614             164/currency %
14615             166/brokenbar %
14616             168/dieresis/copyright/ordfeminine %
14617             172/logicalnot/.notdef/registered/macron/degree/plusminus%
14618             /twosuperior/threesuperior/acute/mu %
14619             183/periodcentered/cedilla/onesuperior/ordmasculine %
14620             188/onequarter/onehalf/threequarters %
14621             192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14622             /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14623             /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14624             /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14625             /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14626             /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14627             /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14628             /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
14629             /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14630             /thorn/ydieresis%
14631         ]%
14632     >>%
14633 }%
14634 \@pdfm@mark{obj @OBJZaDb%
14635     <<%
14636         /Type/Font%
14637         /Subtype/Type1%
14638         /Name/ZaDb%
14639         /BaseFont/ZapfDingbats%
14640     >>%
14641 }%

```

```

14642 \@pdfm@mark{obj @OBJHelv%
14643 <<%
14644 /Type/Font%
14645 /Subtype/Type1%
14646 /Name/Helv%
14647 /BaseFont/Helvetica%
14648 /Encoding @OBJpdfdocencoding%
14649 >>%
14650 }%
14651 \global\let\Hy@FormObjects\relax
14652 }
14653 </dvipdfm | xetex>

```

48.6 Common forms part

```

14654 (*pdfform)

\Fld@pageobjref

14655 \providecommand*{\Fld@pageobjref}{%

\Hy@escapestring

14656 \begingroup\expandafter\expandafter\expandafter\endgroup
14657 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14658 \let\Hy@escapestring\@firstofone
14659 \def\Hy@escapeform#1{%
14660 \ifHy@pdfescapeform
14661 \def\Hy@escapestring##1{%
14662 \noexpand\Hy@escapestring{\noexpand##1}%
14663 }%
14664 \edef\Hy@temp{#1}%
14665 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14666 \def\Hy@escapestring##1{%
14667 \@ifundefined{Hy@esc@\string##1}{%
14668 ##1%
14669 \ThisShouldNotHappen
14670 }{%
14671 \csname Hy@esc@\string##1\endcsname
14672 }%
14673 }%
14674 \else
14675 \let\Hy@escapestring\@firstofone
14676 \fi
14677 }%
14678 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
14679 \ifx\#3\%
14680 \else
14681 \expandafter
14682 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14683 \ltx@ReturnAfterFi{%
14684 \Hy@@@escapeform#3\@nil
14685 }%
14686 \fi
14687 }%
14688 \else
14689 \def\Hy@escapeform#1{%
14690 \ifHy@pdfescapeform
14691 \let\Hy@escapestring\pdfescapestring

```



```

14692 \else
14693 \let\Hy@escapestring\@firstofone
14694 \fi
14695 }%
14696 \Hy@escapeform{}%
14697 \fi

```

\PDFForm@Name

```

14698 \def\PDFForm@Name{%
14699 \PDFForm@@Name\Fld@name
14700 \ifx\Fld@altname\relax
14701 \else
14702 \PDFForm@@Name\Fld@altname
14703 \fi
14704 \ifx\Fld@mappingname\relax
14705 \else
14706 \PDFForm@@Name\Fld@mappingname
14707 \fi
14708 }

```

\PDFForm@@Name

```

14709 \def\PDFForm@@Name#1{%
14710 \begingroup
14711 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14712 \ifHy@unicode
14713 \Hy@unicodetrue
14714 \fi
14715 \fi
14716 \HyPsd@XeTeXBigCharstrue
14717 \pdfstringdef\Hy@gtemp#1%
14718 \endgroup
14719 \let#1\Hy@gtemp
14720 }

```

\Fld@additionalactions

```

14721 \def\Fld@@additionalactions{%
K input (keystroke) format
14722 \ifx\Fld@keystroke@code\@empty
14723 \else
14724 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14725 \fi
F display format
14726 \ifx\Fld@format@code\@empty
14727 \else
14728 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14729 \fi
V validation
14730 \ifx\Fld@validate@code\@empty
14731 \else
14732 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14733 \fi
C calculation
14734 \ifx\Fld@calculate@code\@empty
14735 \else
14736 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14737 \fi

```

Fo receiving the input focus

```
14738 \ifx\Fld@onfocus@code\@empty
14739 \else
14740 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14741 \fi
```

Bl loosing the input focus (blurred)

```
14742 \ifx\Fld@onblur@code\@empty
14743 \else
14744 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14745 \fi
```

D pressing the mouse button (down)

```
14746 \ifx\Fld@onmousedown@code\@empty
14747 \else
14748 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14749 \fi
```

U releasing the mouse button (up)

```
14750 \ifx\Fld@onmouseup@code\@empty
14751 \else
14752 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14753 \fi
```

E cursor enters the annotation's active area.

```
14754 \ifx\Fld@onenter@code\@empty
14755 \else
14756 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14757 \fi
```

X cursor exits the annotation's active area.

```
14758 \ifx\Fld@onexit@code\@empty
14759 \else
14760 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14761 \fi
14762 }
14763 \def\Fld@additionalactions{%
14764 \if\Fld@@additionalactions-%
14765 \else
14766 \ifHy@pdfa
14767 \else
14768 /AA<<\Fld@@additionalactions>>%
14769 \fi
14770 \fi
14771 }
```

\Fld@annotnames

```
14772 \def\Fld@annotnames{%
14773 /T(\Fld@name)%
14774 \ifx\Fld@altname\relax
14775 \else
14776 /TU(\Fld@altname)%
14777 \fi
14778 \ifx\Fld@mappingname\relax
14779 \else
14780 /TM(\Fld@mappingname)%
14781 \fi
14782 }
```

\PDFForm@Check

```
14783 \def\PDFForm@Check{%
14784   /Subtype/Widget%
14785   \Fld@annotflags
14786   \Fld@pageobjref
14787   \Fld@annotnames
14788   /FT/Btn%
14789   \Fld@flags
14790   /Q \Fld@align
14791   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14792   /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14793   /MK<<%
14794     \ifnum\Fld@rotation=\z@
14795     \else
14796       /R \Fld@rotation
14797     \fi
14798     \ifx\Fld@bordercolor\relax
14799     \else
14800       /BC[\Fld@bordercolor]%
14801     \fi
14802     \ifx\Fld@bcolor\relax
14803     \else
14804       /BG[\Fld@bcolor]%
14805     \fi
14806     /CA(\Hy@escapestring{\Fld@cbsymbol})%
14807   >>%
14808   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14809     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14810   /H/P%
14811   \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14812   \Fld@additionalactions
14813 }
```

\PDFForm@Push

```
14814 \ifHy@pdfa
14815 \else
14816   \def\PDFForm@Push{%
14817     /Subtype/Widget%
14818     \Fld@annotflags
14819     \Fld@pageobjref
14820     \Fld@annotnames
14821     /FT/Btn%
14822     \Fld@flags
14823     /H/P%
14824     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14825     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14826       \ifx\Fld@bordercolor\relax\else 1\fi
14827     \space
14828   \else
14829     /MK<<%
14830     \ifnum\Fld@rotation=\z@
14831     \else
14832       /R \Fld@rotation
14833     \fi
14834     \ifx\Fld@bordercolor\relax
14835     \else
14836       /BC[\Fld@bordercolor]%

```

```

14837     \fi
14838     >>%
14839     \fi
14840     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14841     \Fld@additionalactions
14842   }%
14843 \fi

```

\PDFForm@List

```

14844 \def\PDFForm@List{%
14845   /Subtype/Widget%
14846   \Fld@annotflags
14847   \Fld@pageobjref
14848   \Fld@annotnames
14849   /FT/Ch%
14850   \Fld@flags
14851   /Q \Fld@align
14852   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14853   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14854     \ifx\Fld@bordercolor\relax\else 1\fi
14855     \ifx\Fld@bcolor\relax \else 1\fi
14856     \space
14857   \else
14858     /MK<<%
14859     \ifnum\Fld@rotation=\z@
14860     \else
14861       /R \Fld@rotation
14862     \fi
14863     \ifx\Fld@bordercolor\relax
14864     \else
14865       /BC[\Fld@bordercolor]%
14866     \fi
14867     \ifx\Fld@bcolor\relax
14868     \else
14869       /BG[\Fld@bcolor]%
14870     \fi
14871     >>%
14872   \fi
14873   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14874     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14875   \Fld@choices
14876   \Fld@additionalactions
14877 }

```

\PDFForm@Radio

```

14878 \def\PDFForm@Radio{%
14879   /Subtype/Widget%
14880   \Fld@annotflags
14881   \Fld@pageobjref
14882   \Fld@annotnames
14883   /FT/Btn%
14884   \Fld@flags
14885   /H/P%
14886   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14887   /MK<<%
14888   \ifnum\Fld@rotation=\z@
14889   \else

```

```

14890      /R \Fld@rotation
14891      \fi
14892      \ifx\Fld@bordercolor\relax
14893      \else
14894      /BC[\Fld@bordercolor]%
14895      \fi
14896      \ifx\Fld@bcolor\relax
14897      \else
14898      /BG[\Fld@bcolor]%
14899      \fi
14900      /CA(\Hy@escapestring{\Fld@radiosymbol})%
14901      >>%
14902      /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14903      \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14904      \ifx\Fld@default\@empty
14905      /V/Off%
14906      /DV/Off%
14907      \else
14908      /V/\Fld@default
14909      /DV/\Fld@default
14910      \fi
14911      \Fld@additionalactions
14912      }

```

\PDFForm@Text

```

14913 \def\PDFForm@Text{%
14914 /Subtype/Widget%
14915 \Fld@annotflags
14916 \Fld@pageobjref
14917 \Fld@annotnames
14918 /FT/Tx%
14919 \Fld@flags
14920 /Q \Fld@align
14921 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14922 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14923      \ifx\Fld@bordercolor\relax\else 1\fi
14924      \ifx\Fld@bcolor\relax \else 1\fi
14925      \space
14926 \else
14927 /MK<<%
14928      \ifnum\Fld@rotation=\z@
14929      \else
14930      /R \Fld@rotation
14931      \fi
14932      \ifx\Fld@bordercolor\relax
14933      \else
14934      /BC[\Fld@bordercolor]%
14935      \fi
14936      \ifx\Fld@bcolor\relax
14937      \else
14938      /BG[\Fld@bcolor]%
14939      \fi
14940      >>%
14941      \fi
14942      /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14943      \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

```

14944 /DV(\Hy@escapestring{\Fld@default})%
14945 /V(\Hy@escapestring{\Fld@value})%
14946 \Fld@additionalactions
14947 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14948 }

```

\PDFForm@Submit

```

14949 \def\PDFForm@Submit{%
14950 /Subtype/Widget%
14951 \Fld@annotflags
14952 \Fld@pageobjref
14953 \Fld@annotnames
14954 /FT/Btn%
14955 \Fld@flags
14956 /H/P%
14957 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14958 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14959 \ifx\Fld@bordercolor\relax\else 1\fi
14960 \space
14961 \else
14962 /MK<<%
14963 \ifnum\Fld@rotation=\z@
14964 \else
14965 /R \Fld@rotation
14966 \fi
14967 \ifx\Fld@bordercolor\relax
14968 \else
14969 /BC[\Fld@bordercolor]%
14970 \fi
14971 >>%
14972 \fi
14973 /A<<%
14974 /S/SubmitForm%
14975 /F<<%
14976 /FS/URL%
14977 /F(\Hy@escapestring{\Form@action})%
14978 >>%
14979 \Fld@submitflags
14980 >>%
14981 \Fld@additionalactions
14982 }

```

\PDFForm@Reset

```

14983 \ifHy@pdfa
14984 \else
14985 \def\PDFForm@Reset{%
14986 /Subtype/Widget%
14987 \Fld@annotflags
14988 \Fld@pageobjref
14989 \Fld@annotnames
14990 /FT/Btn%
14991 \Fld@flags
14992 /H/P%
14993 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14994 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14995 \ifx\Fld@bordercolor\relax\else 1\fi
14996 \space

```

```

14997 \else
14998 /MK<<%
14999 \ifnum\Fld@rotation=\z@
15000 \else
15001 /R \Fld@rotation
15002 \fi
15003 \ifx\Fld@bordercolor\relax
15004 \else
15005 /BC[\Fld@bordercolor]%
15006 \fi
15007 % /CA (Clear)
15008 % /AC (Done)
15009 >>%
15010 \fi
15011 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15012 /A<</S/ResetForm>>%
15013 \Fld@additionalactions
15014 }%
15015 \fi

15016 </pdfform>
15017 <*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 \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

15018 \def\phantomsection{%
15019 \Hy@MakeCurrentHrefAuto{section*}%
15020 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15021 }
15022 </package>

```

49.1 Bookmarks

```
15023 <*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on $\varepsilon\text{-TeX}$, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of $\varepsilon\text{-TeX}$'s implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOK-MARK` commands in that file.

```

15024 \def\Hy@writebookmark#1#2#3#4#5{%
15025   % section number, text, label, level, file
15026   \ifx\WriteBookmarks\relax%
15027   \else
15028     \ifnum#4>\Hy@bookmarksdepth\relax
15029     \else
15030       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
15031     \fi
15032   \fi
15033 }
15034 \def\Hy@currentbookmarklevel{0}
15035 \def\Hy@numberline#1{#1 }
15036 \def\@@writetorep#1#2#3#4#5{%
15037   \begingroup
15038     \edef\Hy@tempa{#5}%
15039     \ifx\Hy@tempa\Hy@bookmarkstype
15040       \edef\Hy@level{#4}%
15041       \ifx\Hy@levelcheck Y%
15042         \@tempcnta\Hy@level\relax
15043         \advance\@tempcnta by -1 %
15044         \ifnum\Hy@currentbookmarklevel<\@tempcnta
15045           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15046           \advance\@tempcnta by 1 %
15047           \Hy@Warning{%
15048             Difference (\the\@tempcnta) between bookmark levels is %
15049             greater \MessageBreak than one, level fixed%
15050           }%
15051           \@tempcnta\Hy@currentbookmarklevel
15052           \advance\@tempcnta by 1 %
15053           \edef\Hy@level{\the\@tempcnta}%
15054         \fi
15055       \else
15056         \global\let\Hy@levelcheck Y%
15057       \fi
15058       \global\let\Hy@currentbookmarklevel\Hy@level
15059       \@tempcnta\Hy@level\relax
15060       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15061       \advance\@tempcnta by -1 %
15062       \edef\Hy@tempa{#3}%
15063       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15064       \ifx\Hy@tempa\Hy@tempb
15065         \Hy@Warning{%
15066           The anchor of a bookmark and its parent's must not%
15067           \MessageBreak be the same. Added a new anchor%
15068         }%
15069       \phantomsection
15070     \fi
15071     \ifHy@bookmarksnumbered
15072       \let\numberline\Hy@numberline
15073       \let\booknumberline\Hy@numberline
15074       \let\partnumberline\Hy@numberline
15075       \let\chapternumberline\Hy@numberline
15076     \else

```



```

15077 \let\numberline\@gobble
15078 \let\booknumberline\@gobble
15079 \let\partnumberline\@gobble
15080 \let\chapternumberline\@gobble
15081 \fi
15082 \HyPsd@XeTeXBigCharstrue
15083 \pdfstringdef\Hy@tempa{#2}%
15084 \HyPsd@SanitizeForOutFile\Hy@tempa
15085 \if@filesw
15086 \stepcounter{bookmark@seq@number}%
15087 \@ifundefined{@outlinefile}{%
15088 }{%
15089 \protected@write{@outlinefile}{%
15090 \protect\BOOKMARK
15091 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15092 {\Hy@tempa}{\Hy@tempb}%
15093 \@percentchar\space\thebookmark@seq@number
15094 }%
15095 }%
15096 \fi
15097 \fi
15098 \endgroup
15099 }
15100 \newcounter{bookmark@seq@number}

15101 \begingroup
15102 \lccode`=(`{`%
15103 \lccode`=(`}`%
15104 \lccode`1=\z@
15105 \lccode`2=\z@
15106 \lccode`3=\z@
15107 \lccode`5=\z@
15108 \lccode`7=\z@
15109 \lccode`\#=\z@
15110 \lccode``=\z@
15111 \lccode`\{=\z@
15112 \lccode`\}= \z@
15113 \lowercase{%
15114 \endgroup
15115 \def\HyPsd@SanitizeForOutFile#1{%
15116 \@onelevel@sanitize\Hy@tempa
15117 \escapechar`\\%
15118 \edef\Hy@tempa{%
15119 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
15120 }%
15121 \edef\Hy@tempa{%
15122 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
15123 }%
15124 }%
15125 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15126 #1%
15127 \ifx\\#2\\%
15128 \expandafter\ltx@gobble
15129 \else
15130 \expandafter\ltx@firstofone
15131 \fi
15132 {%
15133 \string\173%

```

```

15134 \HyPsd@SanitizeOut@BraceLeft#2\@nil
15135 }%
15136 }%
15137 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15138 #1%
15139 \ifx\#2\%
15140 \expandafter\ltx@gobble
15141 \else
15142 \expandafter\ltx@firstofone
15143 \fi
15144 {%
15145 \string\175%
15146 \HyPsd@SanitizeOut@BraceRight#2\@nil
15147 }%
15148 }%
15149 }

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

15150 \newcommand{\currentpdfbookmark}{%
15151 \pdfbookmark[\Hy@currentbookmarklevel]%
15152 }
15153 \newcommand{\subpdfbookmark}{%
15154 \@tempcnta\Hy@currentbookmarklevel
15155 \Hy@StepCount\@tempcnta
15156 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15157 }
15158 \newcommand{\belowpdfbookmark}[2]{%
15159 \@tempcnta\Hy@currentbookmarklevel
15160 \Hy@StepCount\@tempcnta
15161 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15162 \advance\@tempcnta by -1 %
15163 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15164 }

```

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.

```

15165 \renewcommand\pdfbookmark[3][0]{%
15166 \Hy@writebookmark}{#2}{#3.#1}{#1}{toc}%
15167 \hyper@anchorstart{#3.#1}\hyper@anchorend
15168 }
15169 \def\BOOKMARK{%
15170 \@ifnextchar{\@BOOKMARK}{\@BOOKMARK[1][-]}%
15171 }
15172 \def\@BOOKMARK[#1]{%
15173 \@ifnextchar{\@BOOKMARK[{#1}]}{\@BOOKMARK[{#1}][-]}%
15174 }

```

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`

```

15175 \RequirePackage{rerunfilecheck}[2009/12/10]
15176 \def\Hy@OutlineRerunCheck{%
15177 \RerunFileCheck{\jobname.out}{%
15178 \immediate\closeout\@outlinefile

```

```

15179 }{%
15180   Rerun to get outlines right\MessageBreak
15181   or use package `bookmark'%
15182 }%
15183 }

```

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 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.

```

15184 {*vtex}
15185 \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.

```

15186 \begingroup
15187 \catcode\`=12 %
15188 \ifnum\Hy@VTeXversion<650 %
15189 \catcode\`=12 %
15190 \gdef\hv@pdf@char#1#2#3{%
15191 \char
15192 \ifcase'#1#2#3 %
15193 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15194 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15195 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
15196 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15197 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15198 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15199 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15200 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15201 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15202 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15203 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15204 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15205 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15206 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15207 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15208 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15209 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15210 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15211 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15212 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15213 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15214 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15215 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15216 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15217 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15218 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15219 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15220 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15221 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15222 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15223 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%

```

```

15224 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15225 \fi
15226 }%
15227 \else
15228 \gdef\hv@pdf@char{\char'}%
15229 \fi
15230 \endgroup

```

\@@BOOKMARK

```

15231 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15232 \expandafter\edef\csname @count@#3\endcsname{%
15233 \the\@serial@counter
15234 }%
15235 \edef\@mycount{\the\@serial@counter}%
15236 \Hy@StepCount\@serial@counter
15237 \edef\@parcount{%
15238 \expandafter\ifx\csname @count@#5\endcsname\relax
15239 0%
15240 \else
15241 \csname @count@#5\endcsname
15242 \fi
15243 }%
15244 \immediate\special{%
15245 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15246 s=\ifx#2-c\else o\fi,t=#4%
15247 }%
15248 }%

```

\ReadBookmarks

```

15249 \def\ReadBookmarks{%
15250 \begingroup
15251 \def\0{\hv@pdf@char 0}%
15252 \def\1{\hv@pdf@char 1}%
15253 \def\2{\hv@pdf@char 2}%
15254 \def\3{\hv@pdf@char 3}%
15255 \def\{({}%
15256 \def\)}{)%
15257 \def\do##1{%
15258 \ifnum\catcode`##1=\active
15259 \@makeother##1%
15260 \else
15261 \ifnum\catcode`##1=6 %
15262 \@makeother##1%
15263 \fi
15264 \fi
15265 }%
15266 \dospecials
15267 \Hy@safe@activetrue
15268 \InputIfFileExists{jobname.out}{\}{}%
15269 \endgroup
15270 \ifx\WriteBookmarks\relax
15271 \else
15272 \if@filesw
15273 \newwrite\@outlinefile
15274 \Hy@OutlineRerunCheck
15275 \immediate\openout\@outlinefile=jobname.out\relax
15276 \ifHy@typexml

```

```

15277     \immediate\write\@outlinefile{<relaxxml>\relax}%
15278     \fi
15279   \fi
15280 \fi
15281 }

15282 </vtx>
15283 <!*vtx>
15284 \def\ReadBookmarks{%
15285   \pdf@ifdraftmode{ }{%
15286     \begingroup
15287     \def\do##1{%
15288       \ifnum\catcode`##1=\active
15289         \@makeother##1%
15290       \else
15291         \ifnum\catcode`##1=6 %
15292           \@makeother##1%
15293         \fi
15294       \fi
15295     }%
15296     \dospecials
15297     \Hy@safe@activetrue
15298     \escapechar=`\%
15299     \def\@@BOOKMARK[##1][##2]##3##4##5{%
15300       \calc@bm@number{##5}%
15301     }%
15302     \InputIfFileExists{jobname.out}{ }{%
15303       \ifx\WriteBookmarks\relax
15304         \global\let\WriteBookmarks\relax
15305       \fi
15306       \def\@@BOOKMARK[##1][##2]##3##4##5{%
15307         \def\Hy@temp{##4}%
15308       }%
15309       \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15310       \Hy@OutlineName{ }\Hy@pstringName{%
15311         ##2\check@bm@number{##3}%
15312       }{%
15313         \expandafter\strip@prefix\meaning\Hy@temp
15314       }%
15315     </pdf>
15316     <*pdfmark>
15317       \pdfmark{%
15318         pdfmark=/OUT,%
15319         Count={##2\check@bm@number{##3}},%
15320         Dest={##3},%
15321         Title=\expandafter\strip@prefix\meaning\Hy@temp
15322       }%
15323     </pdfmark>
15324     <*dvipdfm|xetex>
15325       \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15326       \pdfmark{%
15327         outline \ifHy@DvipdfmxOutlineOpen
15328           [%
15329           \ifnum##21>\z@
15330           \else
15331             -%
15332           \fi
15333           ] %

```

```

15334         \fi
15335         ##1<<%
15336         /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15337         /A<<%
15338         /S/GoTo%
15339         /D(\Hy@pstringName)%
15340         >>%
15341         >>%
15342     }%
15343 </dvipdfm | xetex>
15344 }%
15345 \begingroup
15346     \def\WriteBookmarks{0}%
15347     \InputIfFileExists{\jobname.out}{-}{-}%
15348 \endgroup
15349 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
15350 \endgroup
15351 }%
15352 \ifx\WriteBookmarks\relax
15353 \else
15354     \if@files
15355         \newwrite\@outlinefile
15356         \Hy@OutlineRerunCheck
15357         \immediate\openout\@outlinefile=\jobname.out\relax
15358         \ifHy@typexml
15359             \immediate\write\@outlinefile{<relaxxml>\relax}%
15360         \fi
15361     \fi
15362 \fi
15363 }
15364 (*pdfTeX)
15365 \def\Hy@OutlineName#1#2#3#4{%
15366     \pdfoutline goto name{#2}count#3{#4}%
15367 }
15368 </pdfTeX>
15369 \def\check@bm@number#1{%
15370     \expandafter\ifx\csname B_#1\endcsname\relax
15371         0%
15372     \else
15373         \csname B_#1\endcsname
15374     \fi
15375 }
15376 \def\calc@bm@number#1{%
15377     \@tempcnta=\check@bm@number{#1}\relax
15378     \advance\@tempcnta by 1 %
15379     \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15380 }
15381 </!vtex>
15382 \ifHy@implicit
15383 \else
15384     \expandafter\endinput
15385 \fi
15386 </outlines>
15387 (*outlines | hypertex)
15388 \newlength\Hy@SectionHShift
15389 \def\Hy@SectionAnchorHref#1{%

```

```

15390 \ifx\protect\@typeset@protect
15391 \Hy@@SectionAnchor{#1}%
15392 \fi
15393 }
15394 \DeclareRobustCommand*\Hy@@SectionAnchor}[1]{%
15395 \leavevmode
15396 \hbox to 0pt{%
15397 \kern-\Hy@SectionHShift
15398 \Hy@raisedlink{%
15399 \hyper@anchorstart{#1}\hyper@anchorend
15400 }%
15401 \hss
15402 }%
15403 }
15404 \let\H@old@ssect\@ssect
15405 \def\@ssect#1#2#3#4#5{%
15406 \Hy@MakeCurrentHrefAuto{section*}%
15407 \setlength{\Hy@SectionHShift}{#1}%
15408 \begingroup
15409 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15410 \toks\tw@\expandafter{%
15411 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15412 #5%
15413 }%
15414 \edef\x{\endgroup
15415 \the\toks@\the\toks\tw@}%
15416 }\x
15417 }
15418 \let\H@old@schapter\@schapter
15419 \def\@schapter#1{%
15420 \begingroup
15421 \let\@mkboth\@gobbletwo
15422 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15423 \Hy@raisedlink{%
15424 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15425 }%
15426 \endgroup
15427 \H@old@schapter{#1}%
15428 }

```

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:

```

15429 \ltx@ifundefined{@chapter}{}{}%
15430 \let\Hy@org@chapter\@chapter
15431 \def\@chapter{%
15432 \def\Hy@next{%
15433 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15434 \Hy@raisedlink{%
15435 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15436 }%
15437 }%
15438 \ifnum\c@secnumdepth>\m@ne
15439 \ltx@ifundefined{if@mainmatter}%
15440 \iftrue{\csname if@mainmatter\endcsname}%
15441 \let\Hy@next\relax
15442 \fi
15443 }

```

```

15444 \Hy@next
15445 \Hy@org@chapter
15446 }%
15447 }

15448 \let\H@old@part\@part
15449 \begingroup\expandafter\expandafter\expandafter\endgroup
15450 \expandafter\ifx\csname chapter\endcsname\relax
15451 \let\Hy@secnum@part\z@
15452 \else
15453 \let\Hy@secnum@part\m@ne
15454 \fi
15455 \def\@part{%
15456 \ifnum\Hy@secnum@part>\c@secnumdepth
15457 \phantomsection
15458 \fi
15459 \H@old@part
15460 }

15461 \let\H@old@spart\@spart
15462 \def\@spart#1{%
15463 \Hy@MakeCurrentHrefAuto{part*}%
15464 \Hy@raisedlink{%
15465 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15466 }%
15467 \H@old@spart{#1}%
15468 }

15469 \let\H@old@sect\@sect
15470 \def\@sect#1#2#3#4#5#6[#7]#8{%
15471 \ifnum #2>\c@secnumdepth
15472 \expandafter\@firstoftwo
15473 \else
15474 \expandafter\@secondoftwo
15475 \fi
15476 {%
15477 \Hy@MakeCurrentHrefAuto{section*}%
15478 \setlength{\Hy@SectionHShift}{#3}%
15479 \begingroup
15480 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15481 \toks\tw@\expandafter{%
15482 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15483 #8%
15484 }%
15485 \edef\x{\endgroup
15486 \the\toks@{\the\toks\tw@}%
15487 }\x
15488 }{%
15489 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15490 }%
15491 }

15492 </outlines | hypertex>
15493 <*outlines>

15494 \expandafter\def\csname Parent-4\endcsname{}
15495 \expandafter\def\csname Parent-3\endcsname{}
15496 \expandafter\def\csname Parent-2\endcsname{}
15497 \expandafter\def\csname Parent-1\endcsname{}
15498 \expandafter\def\csname Parent0\endcsname{}
15499 \expandafter\def\csname Parent1\endcsname{}

```



```

15500 \expandafter\def\csname Parent2\endcsname{}
15501 \expandafter\def\csname Parent3\endcsname{}
15502 \expandafter\def\csname Parent4\endcsname{}
15503 </outlines>

```

50 Compatibility with koma-script classes

```
15504 <*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.

```

15505 \def\Hy@tempa{%
15506   \def\@addchap{##1}##2{%
15507     \typeout{##2}%
15508     \if@twoside
15509       \@mkboth{##1}{}%
15510     \else
15511       \@mkboth{}{##1}%
15512     \fi
15513     \addtocontents{lof}{\protect\addvspace{10\p@}}%
15514     \addtocontents{lot}{\protect\addvspace{10\p@}}%
15515     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15516     \Hy@raisedlink{%
15517       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15518     }%
15519     \if@twocolumn
15520       \@topnewpage[\@makeschapterhead{##2}]%
15521     \else
15522       \@makeschapterhead{##2}%
15523       \@afterheading
15524     \fi
15525     \addcontentsline{toc}{chapter}{##1}%
15526   }%
15527 }
15528 \@ifclassloaded{scrbook}{%
15529   \@ifclasslater{scrbook}{2001/01/01}{%
15530     \let\Hy@tempa\@empty
15531   }{}%
15532 }{}%
15533 \@ifclassloaded{scrreprt}{%
15534   \@ifclasslater{scrreprt}{2001/01/01}{%
15535     \let\Hy@tempa\@empty
15536   }{}%
15537 }{}%
15538 \let\Hy@tempa\@empty
15539 }%
15540 }%
15541 \Hy@tempa
15542 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```
15543 ⟨*pd1enc⟩
15544 \DeclareFontEncoding{PD1}{-}{-}

Accents
15545 \DeclareTextAccent{`}{PD1}{\textasciigrave}
15546 \DeclareTextAccent{'}{PD1}{\textacute}
15547 \DeclareTextAccent{^}{PD1}{\textasciicircum}
15548 \DeclareTextAccent{~}{PD1}{\texttilde}
15549 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
15550 \DeclareTextAccent{r}{PD1}{\textring}
15551 \DeclareTextAccent{v}{PD1}{\textasciicaron}
15552 \DeclareTextAccent{.}{PD1}{\textdotaccent}
15553 \DeclareTextAccent{c}{PD1}{\textcedilla}
15554 \DeclareTextAccent{=}{PD1}{\textasciimacron}
15555 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
15556 \DeclareTextAccent{d}{PD1}{\textdotbelow}
15557 \DeclareTextCompositeCommand{`}{PD1}{\@empty}{\textasciigrave}
15558 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}
15559 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
15560 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
15561 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
15562 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textring}
15563 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
15564 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
15565 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
15566 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}
15567 \DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}
15568 \DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}
15569 \DeclareTextCompositeCommand{`}{PD1}{\ }{\textasciigrave}
15570 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textacute}
15571 \DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}
15572 \DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}
15573 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}
15574 \DeclareTextCompositeCommand{r}{PD1}{\ }{\textring}
15575 \DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}
15576 \DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}
15577 \DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}
15578 \DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}
15579 \DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}
15580 \DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}
15581 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15582 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15583 \DeclareTextCommand{\newtie}{PD1}[1]{%
15584 \TextSymbolUnavailable{\newtie{#1}}#1%
15585 }
```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```
15586 % U+0009 (CHARACTER TABULATION)
15587 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15588 % U+000A (LINE FEED)
15589 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15590 % U+000D (CARRIAGE RETURN)
15591 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D
```

Accent glyph names

```
15592 % U+02D8 BREVE; breve
15593 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
```

15594 % U+02C7 CARON; caron
 15595 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
 15596 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
 15597 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
 15598 % U+02D9 DOT ABOVE; dotaccent
 15599 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 15600 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 15601 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 15602 % U+02DB OGONEK; ogonek
 15603 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 15604 % U+02DA RING ABOVE; ring
 15605 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 15606 % U+02DC SMALL TILDE; ilde, *tilde
 15607 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 15608 % U+0022 QUOTATION MARK; quotedbl
 15609 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
 15610 % U+0023 NUMBER SIGN; numbersign
 15611 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 15612 % U+0024 DOLLAR SIGN; dollar
 15613 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15614 % U+0025 PERCENT SIGN; percent
 15615 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15616 % U+0026 AMPERSAND; ampersand
 15617 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

 \047: U+0027 APOSTROPHE; quotesingle

 15618 % U+0028 LEFT PARENTHESIS; parenleft
 15619 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 15620 % U+0029 RIGHT PARENTHESIS; parenright
 15621 \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
 15622 % U+002E FULL STOP; period
 15623 \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
 15624 % U+003C LESS-THAN SIGN; less
 15625 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

 \075: U+003D EQUALS SIGN; equal
 15626 % U+003E GREATER-THAN SIGN; greater
 15627 \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
 15628 % U+005C REVERSE SOLIDUS; backslash
 15629 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15630 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15631 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15632 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15633 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15634 % U+005F LOW LINE; underscore
 15635 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15636 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15637 % U+0060 GRAVE ACCENT; grave
 15638 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15639 % U+0069 LATIN SMALL LETTER I; i
 15640 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15641 % U+007B LEFT CURLY BRACKET; braceleft
 15642 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15643 % U+007C VERTICAL LINE; *bar, verticalbar
 15644 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15645 % U+007D RIGHT CURLY BRACKET; braceright
 15646 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15647 % U+007E TILDE; asciitilde
 15648 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15649 % U+2022 BULLET; bullet
 15650 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15651 % U+2020 DAGGER; dagger
 15652 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15653 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 15654 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15655 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15656 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15657 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15658 % U+2014 EM DASH; emdash
 15659 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15660 % U+2013 EN DASH; endash
 15661 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15662 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15663 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15664 % U+2044 FRACTION SLASH; fraction
 15665 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15666 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 15667 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 15668 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 15669 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 15670 % U+2212 MINUS SIGN; minus
 15671 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212

15672 % U+2030 PER MILLE SIGN; perthousand
 15673 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15674 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15675 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15676 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15677 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15678 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15679 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15680 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15681 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15682 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15683 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15684 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15685 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15686 % U+2122 TRADE MARK SIGN; trademark
 15687 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15688 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15689 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15690 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15691 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15692 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15693 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15694 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15695 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15696 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15697 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15698 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15699 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
 15700 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15701 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15702 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15703 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15704 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15705 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15706 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15707 % U+0153 LATIN SMALL LIGATURE OE; oe
 15708 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15709 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15710 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15711 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15712 \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.
 15713 % U+20AC EURO SIGN; *Euro, euro
 15714 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15715 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15716 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15717 % U+00A2 CENT SIGN; cent
 15718 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15719 % U+00A3 POUND SIGN; sterling
 15720 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15721 % U+00A4 CURRENCY SIGN; currency
 15722 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15723 % U+00A5 YEN SIGN; yen
 15724 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15725 % U+00A6 BROKEN BAR; brokenbar
 15726 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6

15727 % U+00A7 SECTION SIGN; section
 15728 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15729 % U+00A8 DIAERESIS; dieresis
 15730 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15731 % U+00A9 COPYRIGHT SIGN; copyright
 15732 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15733 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15734 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15735 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 15736 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 15737 % U+00AC NOT SIGN; logicalnot
 15738 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 15739 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 15740 % U+00AE REGISTERED SIGN; registered
 15741 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 15742 % U+00AF MACRON; *macron, overscore
 15743 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 15744 % U+00B0 DEGREE SIGN; degree
 15745 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 15746 % U+00B1 PLUS-MINUS SIGN; plusminus
 15747 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 15748 % U+00B2 SUPERSCRIPT TWO; twosuperior
 15749 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
 15750 % U+00B3 SUPERSCRIPT THREE; threesuperior
 15751 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
 15752 % U+00B4 ACUTE ACCENT; acute
 15753 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 15754 % U+00B5 MICRO SIGN; mu, mul
 15755 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 15756 % U+00B6 PILCROW SIGN; paragraph
 15757 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 15758 % U+00B7 MIDDLE DOT; middot, *periodcentered
 15759 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 15760 % U+00B8 CEDILLA; cedilla
 15761 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 15762 % U+00B9 SUPERSCRIPT ONE; onesuperior
 15763 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
 15764 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 15765 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 15766 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 15767 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 15768 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 15769 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 15770 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 15771 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 15772 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 15773 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 15774 % U+00BF INVERTED QUESTION MARK; questiondown
 15775 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 15776 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 15777 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 15778 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 15779 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 15780 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex

15781 \DeclareTextCompositeCommand{\`}{PD1}{A}{\302}% U+00C2
15782 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15783 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15784 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15785 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15786 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15787 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15788 % U+00C6 LATIN CAPITAL LETTER AE; AE
15789 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15790 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
15791 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15792 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15793 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15794 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15795 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15796 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15797 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15798 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15799 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15800 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15801 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15802 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15803 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15804 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15805 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15806 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15807 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15808 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15809 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15810 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15811 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15812 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15813 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15814 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15815 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15816 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15817 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15818 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15819 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15820 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15821 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15822 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15823 % U+00D7 MULTIPLICATION SIGN; multiply
15824 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15825 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15826 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15827 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15828 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15829 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15830 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15831 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15832 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15833 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15834 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15835 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15836 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15837 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)

15838 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15839 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15840 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15841 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15842 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15843 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15844 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15845 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15846 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15847 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
15848 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15849 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15850 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15851 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15852 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15853 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15854 % U+00E6 LATIN SMALL LETTER AE; ae
15855 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15856 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15857 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15858 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15859 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15860 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15861 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15862 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15863 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15864 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15865 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15866 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15867 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15868 \DeclareTextCompositeCommand{\~}{PD1}{i}{\354}% U+00EC
15869 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15870 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15871 \DeclareTextCompositeCommand{\^}{PD1}{i}{\355}% U+00ED
15872 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15873 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15874 \DeclareTextCompositeCommand{\~}{PD1}{i}{\356}% U+00EE
15875 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15876 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15877 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15878 % U+00F0 LATIN SMALL LETTER ETH; eth
15879 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15880 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15881 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15882 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15883 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15884 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15885 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15886 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15887 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15888 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15889 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15890 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15891 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15892 % U+00F7 DIVISION SIGN; divide
15893 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15894 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash


```

15895 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15896 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15897 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15898 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15899 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15900 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15901 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15902 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15903 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15904 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15905 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15906 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15907 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15908 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15909 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15910 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
15911 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15912 \DeclareTextCommand{\SS}{PD1}{SS}%
15913 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15914 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15915 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15916 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15917 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15918 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15919 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15920 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15921 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15922 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15923 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15924 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15925 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15926 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15927 \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).

```

15928 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15929 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15930 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15931 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15932 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15933 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15934 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15935 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15936 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15937 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15938 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15939 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15940 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15941 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

15942 \end{pd1enc}

```

51.2 PU encoding

15943 `*puenc`
15944 `\DeclareFontEncoding{PU}{-}{-}`

51.2.1 NFSS2 accents

15945 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15946 `\DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300`
15947 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15948 `\DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301`
15949 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15950 `\DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302`
15951 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15952 `\DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303`
15953 % U+0304 COMBINING MACRON; macroncmb
15954 `\DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304`
15955 % U+0306 COMBINING BREVE; brevecmb
15956 `\DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306`
15957 `\DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306`
15958 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15959 `\DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307`
15960 % U+0308 COMBINING DIAERESIS; dieresiscmb
15961 `\DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308`
15962 % U+030A COMBINING RING ABOVE; ringcmb
15963 `\DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A`
15964 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15965 `\DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B`
15966 % U+030C COMBINING CARON; caroncmb
15967 `\DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C`
15968 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15969 `\DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F`
15970 `\DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F`
15971 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15972 `\DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311`
15973 `\DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311`
15974 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
15975 `\DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323`
15976 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
laut (tipa)
15977 `\DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324`
15978 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15979 `\DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325`
15980 % U+0327 COMBINING CEDILLA; cedillacmb
15981 `\DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327`
15982 % U+0328 COMBINING OGONEK; ogonekcmb
15983 `\DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328`
15984 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15985 % \textsubcircum (tipa)
15986 `\DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D`
15987 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15988 `\DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E`
15989 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15990 `\DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330`
15991 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15992 `\DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331`
15993 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
blecmb
15994 `\DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361`

15995 % U+20DD COMBINING ENCLOSING CIRCLE

15996 \DeclareTextCommand{\textcircled}{PU}[1]{\#1\9040\335}% U+20DD

Double accents.

15997 \DeclareTextCommand{\textacutemacron}{PU}[1]{\#1\83\001\83\004}% U+0301 U+0304

15998 \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.

15999 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%

16000 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%

16001 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}%

16002 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%

16003 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%

16004 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%

16005 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%

16006 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%

16007 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%

16008 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%

16009 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%

16010 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%

16011 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%

16012 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%

16013 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\83\021\}}% U+0311

16014 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\83\044\}}% U+0324

16015 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%

16016 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircumlow}%

16017 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\83\056\}}% U+032E

16018 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%

16019 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%

16020 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%

16021 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%

16022 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%

16023 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%

16024 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\83\001\83\004\}}% U+0301 U

16025 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\83\000\83\004\}}% U+0300 U

16026 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%

16027 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%

16028 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%

16029 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%

16030 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%

16031 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%

16032 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%

16033 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%

16034 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%

16035 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%

16036 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%

16037 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%

16038 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%

16039 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%

16040 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\83\021\}}% U+0311

16041 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\83\044\}}% U+0324

16042 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%

16043 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%

16044 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\83\056\}}% U+032E

16045 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%

16046 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%

```

16047 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
16048 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
16049 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
16050 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
16051 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\ \83\001\83\004}% U+0301 U+0304
16052 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\ \83\000\83\004}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

16053 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16054 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16055 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16056 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}%
16057 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16058 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16059 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
16060 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16061 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16062 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16063 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16064 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16065 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16066 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16067 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

16068 % U+0009 (CHARACTER TABULATION)
16069 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16070 % U+000A (LINE FEED)
16071 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16072 % U+000D (CARRIAGE RETURN)
16073 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
16074 % U+0022 QUOTATION MARK; quotedbl
16075 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16076 % U+0023 NUMBER SIGN; numbersign
16077 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16078 % U+0024 DOLLAR SIGN; dollar
16079 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16080 %* \textdollar -> \mathdollar
16081 %* \textdollar -> \EyesDollar (marvosym)
16082 % U+0025 PERCENT SIGN; percent
16083 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16084 % U+0026 AMPERSAND; ampersand
16085 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16086 %* \textampersand -> \binampersand (stmaryrd)
16087 %* \textampersand -> \with (cmll)
16088 % U+0027 APOSTROPHE; quotesingle
16089 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16090 % U+0028 LEFT PARENTHESIS; parenleft
16091 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16092 % U+0029 RIGHT PARENTHESIS; parenright
16093 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16094 % U+002A ASTERISK; asterisk; (?)
16095 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16096 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)

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16097 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16098 % U+002C COMMA; comma; \MVComma (marvosym)
16099 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16100 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16101 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16102 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16103 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16104 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16105 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16106 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16107 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16108 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
16109 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
16110 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
16111 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
16112 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
16113 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
16114 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
16115 \DeclareTextCommand{\textMVFour}{PU}{\80\064}%* U+0034
16116 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
16117 \DeclareTextCommand{\textMVFive}{PU}{\80\065}%* U+0035
16118 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
16119 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
16120 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
16121 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
16122 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
16123 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
16124 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
16125 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039

\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon

16126 % U+003C LESS-THAN SIGN; less
16127 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

16128 % U+003E GREATER-THAN SIGN; greater
16129 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E

\80\077: U+003F QUESTION MARK; question

16130 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
16131 \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

16132 % U+005C REVERSE SOLIDUS; backslash
16133 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C

\80\135: U+005D RIGHT SQUARE BRACKET; bracketright

16134 % U+005E CIRCUMFLEX ACCENT; asciicircum
16135 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
16136 % U+005F LOW LINE; underscore
16137 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
16138 %* \textunderscore -> \mathunderscore (LaTeX)
16139 % U+0060 GRAVE ACCENT; grave
16140 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060

$\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
 ...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
 16141 % U+0069 LATIN SMALL LETTER I; i
 16142 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% $\backslash 80\backslash 151$ U+0069
 16143 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
 ...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
 16144 % U+007B LEFT CURLY BRACKET; braceleft
 16145 \DeclareTextCommand{\textbraceleft}{PU}{\backslash 80\backslash 173}% U+007B
 16146 % U+007C VERTICAL LINE; *bar, verticalbar
 16147 \DeclareTextCommand{\textbar}{PU}{|}% $\backslash 80\backslash 174$ U+007C
 16148 %* \textbar -> \textvertline (tipa)
 16149 % U+007D RIGHT CURLY BRACKET; braceright
 16150 \DeclareTextCommand{\textbraceright}{PU}{\backslash 80\backslash 175}% U+007D
 16151 % U+007E TILDE; asciitilde
 16152 \DeclareTextCommand{\textasciitilde}{PU}{\backslash 80\backslash 176}% U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 16153 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 16154 \DeclareTextCommand{\textexclamdown}{PU}{\backslash 80\backslash 241}% U+00A1
 16155 % U+00A2 CENT SIGN; cent
 16156 \DeclareTextCommand{\textcent}{PU}{\backslash 80\backslash 242}% U+00A2
 16157 % U+00A3 POUND SIGN; sterling
 16158 \DeclareTextCommand{\textsterling}{PU}{\backslash 80\backslash 243}% U+00A3
 16159 %* \textsterling -> \mathsterling (LaTeX)
 16160 %* \textsterling -> \pounds (LaTeX)
 16161 % U+00A4 CURRENCY SIGN; currency
 16162 \DeclareTextCommand{\textcurrency}{PU}{\backslash 80\backslash 244}% U+00A4
 16163 % U+00A5 YEN SIGN; yen
 16164 \DeclareTextCommand{\textyen}{PU}{\backslash 80\backslash 245}% U+00A5
 16165 % U+00A6 BROKEN BAR; brokenbar
 16166 \DeclareTextCommand{\textbrokenbar}{PU}{\backslash 80\backslash 246}% U+00A6
 16167 %* \textbrokenbar -> \brokenvert (wasysym)
 16168 % U+00A7 SECTION SIGN; section
 16169 \DeclareTextCommand{\textsection}{PU}{\backslash 80\backslash 247}% U+00A7
 16170 %* \textsection -> \mathsection (LaTeX)
 16171 %* \textsection -> \S (LaTeX)
 16172 % U+00A8 DIAERESIS; dieresis
 16173 \DeclareTextCommand{\textasciidieresis}{PU}{\backslash 80\backslash 250}% U+00A8
 16174 % U+00A9 COPYRIGHT SIGN; copyright
 16175 \DeclareTextCommand{\textcopyright}{PU}{\backslash 80\backslash 251}%* U+00A9
 16176 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 16177 \DeclareTextCommand{\textordfeminine}{PU}{\backslash 80\backslash 252}% U+00AA
 16178 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 16179 \DeclareTextCommand{\guillemotleft}{PU}{\backslash 80\backslash 253}% U+00AB
 16180 % U+00AC NOT SIGN; logicalnot
 16181 \DeclareTextCommand{\textlogicalnot}{PU}{\backslash 80\backslash 254}% U+00AC
 16182 \DeclareTextCommand{\textlnot}{PU}{\backslash 80\backslash 254}% U+00AC
 $\backslash 80\backslash 255$: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 16183 % U+00AE REGISTERED SIGN; registered

16184 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
16185 % U+00AF MACRON; *macron, overscore
16186 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
16187 % U+00B0 DEGREE SIGN; degree
16188 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
16189 % U+00B1 PLUS-MINUS SIGN; plusminus
16190 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
16191 % U+00B2 SUPERSCRIPT TWO; twosuperior
16192 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
16193 % U+00B3 SUPERSCRIPT THREE; threesuperior
16194 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
16195 % U+00B4 ACUTE ACCENT; acute
16196 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
16197 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
16198 % U+00B5 MICRO SIGN; mu, mul
16199 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
16200 % U+00B6 PILCROW SIGN; paragraph
16201 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
16202 %* \textparagraph -> \mathparagraph (LaTeX)
16203 % U+00B7 MIDDLE DOT; middot, *periodcentered
16204 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
16205 %* \textperiodcentered -> \MultiplicationDot (marvosym)
16206 %* \textperiodcentered -> \Squaredot (marvosym)
16207 % U+00B8 CEDILLA; cedilla
16208 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
16209 % U+00B9 SUPERSCRIPT ONE; onesuperior
16210 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
16211 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
16212 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
16213 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
16214 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
16215 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
16216 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
16217 % U+00BD VULGAR FRACTION ONE HALF; onehalf
16218 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
16219 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
16220 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
16221 % U+00BF INVERTED QUESTION MARK; questiondown
16222 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
16223 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
16224 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
16225 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
16226 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
16227 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
16228 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
16229 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
16230 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
16231 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
16232 \DeclareTextCompositeCommand{\\"}{PU}{A}{\80\304}% U+00C4
16233 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
16234 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
16235 % U+00C6 LATIN CAPITAL LETTER AE; AE
16236 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
16237 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
16238 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
16239 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave

16240 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
16241 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
16242 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
16243 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
16244 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
16245 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
16246 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
16247 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
16248 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
16249 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
16250 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
16251 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
16252 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
16253 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16254 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
16255 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16256 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16257 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16258 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
16259 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16260 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
16261 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16262 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
16263 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
16264 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
16265 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16266 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
16267 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16268 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
16269 % U+00D7 MULTIPLICATION SIGN; multiply
16270 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16271 %* \textmultiply -> \vartimes (stmaryrd)
16272 %* \textmultiply -> \MVMultiplication (marvosym)
16273 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16274 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16275 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16276 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
16277 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16278 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
16279 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16280 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
16281 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16282 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
16283 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16284 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
16285 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16286 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16287 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16288 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16289 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16290 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16291 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
16292 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16293 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
16294 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16295 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
16296 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde

16297 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
16298 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16299 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
16300 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16301 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16302 % U+00E6 LATIN SMALL LETTER AE; ae
16303 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16304 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16305 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16306 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16307 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
16308 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16309 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
16310 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16311 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
16312 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16313 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16314 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16315 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16316 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16317 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16318 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16319 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\355}% U+00ED
16320 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16321 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16322 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16323 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16324 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16325 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16326 % U+00F0 LATIN SMALL LETTER ETH; eth
16327 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16328 %* \dh -> \eth (wsuipa, phonetic)
16329 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16330 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
16331 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
16332 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
16333 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
16334 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
16335 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
16336 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
16337 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
16338 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
16339 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
16340 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
16341 % U+00F7 DIVISION SIGN; divide
16342 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
16343 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
16344 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
16345 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
16346 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
16347 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
16348 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
16349 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
16350 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
16351 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
16352 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
16353 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute

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16354 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
16355 % U+00FE LATIN SMALL LETTER THORN; thorn;
16356 % \th, \thorn (wasysym), \textthorn (tipa)
16357 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
16358 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
16359 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
16360 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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51.2.4 Latin Extended-A: U+0080 to U+017F

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16361 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
16362 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
16363 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
16364 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16365 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16366 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16367 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16368 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16369 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16370 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16371 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
16372 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16373 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16374 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
16375 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16376 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16377 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16378 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16379 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16380 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16381 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16382 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16383 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16384 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16385 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16386 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16387 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16388 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16389 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16390 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16391 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16392 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16393 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16394 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16395 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16396 % \textcrd (tipa)
16397 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16398 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16399 %* \textcrd -> \crossd (wsuipa)
16400 % An alternate glyph with the stroke through the bowl:
16401 %* \textcrd -> \textbard (tipa)
16402 %* \textcrd -> \bard (wsuipa)
16403 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16404 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16405 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16406 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113

```

16407 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
 16408 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
 16409 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
 16410 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
 16411 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
 16412 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
 16413 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
 16414 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
 16415 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
 16416 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
 16417 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
 16418 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
 16419 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
 16420 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
 16421 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
 16422 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
 16423 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
 16424 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
 16425 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
 16426 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
 16427 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
 16428 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
 16429 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
 16430 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
 16431 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
 cent
 16432 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
 16433 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
 16434 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
 16435 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
 maaccent
 16436 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
 16437 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
 16438 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
 16439 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
 16440 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
 16441 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
 16442 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
 16443 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
 16444 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
 16445 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
 16446 \DeclareTextCommand{\textthbar}{PU}{\81\047}%* U+0127
 16447 %* \textthbar -> \textcrh (tipa)
 16448 %* \textthbar -> \crossh (wsuipa)
 16449 %* \textthbar -> \planck (phonetic)
 16450 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
 16451 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 16452 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
 16453 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 16454 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 16455 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
 16456 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
 16457 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
 16458 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 16459 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 16460 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
 16461 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C

```

16462 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16463 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16464 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
16465 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; iogonek
16466 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16467 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16468 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16469 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16470 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16471 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16472 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16473 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16474 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16475 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16476 % U+0133 LATIN SMALL LIGATURE IJ; ij
16477 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16478 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16479 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16480 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16481 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16482 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135
16483 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16484 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16485 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16486 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has choosen `\textkra`.

```

16487 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16488 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16489 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16490 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16491 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16492 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16493 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
16494 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16495 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16496 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16497 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16498 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16499 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16500 \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`.

```

16501 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent
16502 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
16503 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
16504 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
16505 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
16506 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
16507 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
16508 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142

```

16509 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 16510 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 16511 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 16512 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 16513 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
 cent
 16514 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 16515 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 16516 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 16517 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 16518 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 16519 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 16520 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 16521 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
 trophe, quoterightn
 16522 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16523 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16524 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16525 % U+014B LATIN SMALL LETTER ENG; eng
 16526 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16527 %* \ng -> \eng (wsuipa)
 16528 %* \ng -> \engma (phonetic)
 16529 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16530 \DeclareTextCompositeCommand{=}{PU}{O}{\81\114}% U+014C
 16531 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16532 \DeclareTextCompositeCommand{=}{PU}{o}{\81\115}% U+014D
 16533 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16534 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16535 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16536 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16537 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-
 ute, Ohungarumlaut
 16538 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16539 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odbla-
 cute, ohungarumlaut
 16540 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16541 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16542 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 16543 % U+0153 LATIN SMALL LIGATURE OE; oe
 16544 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 16545 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 16546 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16547 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16548 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16549 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
 cent
 16550 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16551 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16552 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16553 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16554 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16555 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16556 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16557 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16558 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16559 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16560 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B

16561 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
16562 \DeclareTextCompositeCommand{\~}{PU}{S}{\81\134}% U+015C
16563 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
16564 \DeclareTextCompositeCommand{\~}{PU}{s}{\81\135}% U+015D
16565 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
16566 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
16567 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
16568 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
16569 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
16570 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
16571 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
16572 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
16573 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-
cent
16574 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16575 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16576 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16577 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16578 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16579 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16580 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16581 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16582 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16583 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16584 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16585 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16586 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16587 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16588 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16589 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16590 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16591 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16592 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
16593 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16594 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
16595 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
16596 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
16597 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
16598 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
16599 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
16600 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
16601 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
cute, Uhungarumlaut
16602 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
16603 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
cute, uhungarumlaut
16604 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
16605 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
16606 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
16607 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
16608 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
16609 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
16610 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
16611 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
16612 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
16613 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
16614 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176

16615 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16616 \DeclareTextCompositeCommand{\~}{PU}{y}{\81\167}% U+0177
 16617 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16618 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16619 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16620 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16621 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16622 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 16623 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16624 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 16625 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16626 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 16627 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16628 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16629 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16630 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16631 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16632 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16633 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16634 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16635 %* \textcrb -> \crossb (wsuipa)
 16636 % An alternate glyph with the stroke through the bowl:
 16637 %* \textcrb -> \textbarb (tipa)
 16638 %* \textcrb -> \barb (wsuipa)
 16639 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausaB (pho-
 netic)
 16640 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
 16641 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 16642 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 16643 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausaD (pho-
 netic)
 16644 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A
 16645 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
 16646 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
 16647 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
 16648 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 16649 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 16650 %* \textflorin -> \Florin (marvosym)
 16651 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
 16652 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
 16653 %* \texthvlig -> \hv (wsuipa)
 16654 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausaK (pho-
 netic)
 16655 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198
 16656 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
 16657 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
 16658 %* \texthtk -> \hausak (phonetic)
 16659 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
 16660 % \textbarl (tipa), \barl (wsuipa)
 16661 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
 16662 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
 16663 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
 16664 % \textcrlambda (tipa)
 16665 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
 16666 %* \textcrlambda -> \crossnilambda (wsuipa)

16667 %* \textcrlambda -> \barlambda (phonetic)
 16668 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
 16669 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
 16670 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-long;
 16671 % \textnrleg (tipx)
 16672 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
 16673 %* \textPUnrleg -> \textnrleg (tipx)
 16674 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
 16675 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
 16676 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
 16677 % \textlhookt (tipa)
 16678 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
 16679 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
 16680 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
 16681 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
 16682 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
 16683 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
 16684 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
 16685 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
 16686 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
 16687 % glottalinvertedstroke; \textcrinvglotstop (tipa)
 16688 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
 16689 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
 16690 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
 16691 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickdental;
 16692 % \textpipe (tipa)
 16693 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
 16694 %* \textpipe -> \textpipevar (tipx)
 16695 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
 16696 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
 16697 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
 16698 %* \textdoublepipe -> \textdoublepipevar (tipx)
 16699 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOUBLE BAR;
 16700 % clickalveolar; \textdoublebarpipe (tipa)
 16701 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
 16702 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
 16703 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 16704 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 16705 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 16706 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 16707 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 16708 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 16709 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 16710 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16711 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16712 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 16713 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 16714 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 16715 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 16716 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 16717 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 16718 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 16719 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 16720 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)

16721 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16722 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16723 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16724 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16725 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16726 %* \textgslash -> \textcrg (tipa)
16727 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16728 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16729 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
16730 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16731 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16732 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16733 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
16734 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16735 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16736 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16737 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16738 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16739 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16740 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16741 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16742 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16743 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16744 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16745 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16746 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16747 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16748 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16749 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16750 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16751 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16752 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16753 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16754 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16755 % *Oslashacute, Ostrokeacute
16756 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16757 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16758 % *oslashacute, ostrokeacute
16759 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16760 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16761 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16762 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16763 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16764 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16765 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16766 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16767 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16768 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16769 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16770 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
16771 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16772 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16773 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16774 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16775 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209

16776 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16777 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; inverted-breve
16778 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16779 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-breve
16780 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16781 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\i}{\82\013}% U+020B
16782 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16783 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16784 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16785 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16786 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-edbreve
16787 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16788 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinvert-breve
16789 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16790 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16791 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16792 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16793 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16794 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16795 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
16796 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16797 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16798 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-edbreve
16799 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
16800 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinvert-breve
16801 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
16802 % U+021E LATIN CAPITAL LETTER H WITH CARON
16803 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
16804 % U+021F LATIN SMALL LETTER H WITH CARON
16805 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
16806 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
16807 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
16808 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
16809 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
16810 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
16811 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
16812 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
16813 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
16814 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
16815 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
16816 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
16817 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
16818 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
16819 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
16820 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
16821 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
16822 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
16823 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
16824 % U+0233 LATIN SMALL LETTER Y WITH MACRON
16825 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
16826 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)

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16827 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
16828 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
16829 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
16830 % U+0237 LATIN SMALL LETTER DOTLESS J
16831 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
16832 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
16833 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
16834 %* \textPUdblig -> \textdblig (tipx)
16835 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
16836 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
16837 %* \textPUqplig -> \textqplig (tipx)
16838 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
16839 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
16840 %* \textslashc -> \textcentoldstyle (textcomp)
16841 % With bar instead of stroke:
16842 %* \textslashc -> \textbarc (tipa)

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51.2.6 IPA Extensions: U+0250 to U+02AF

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16843 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
16844 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
16845 %* \textturna -> \inva (wasysym)
16846 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
16847 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
16848 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
16849 %* \textscripta -> \vara (phonetic)
16850 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
16851 % \textturnscripta (tipa)
16852 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
16853 %* \textturnscripta -> \invscripta (wsuipa)
16854 %* \textturnscripta -> \rotvara (phonetic)
16855 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
16856 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
16857 %* \texthtb -> \hookb (wsuipa)
16858 %* \texthtb -> \hausab (phonetic)
16859 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
16860 % \textopeno (tipa), \openo (wasysym)
16861 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
16862 %* \textopeno -> \varopeno (phonetic)
16863 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
16864 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
16865 %* \textctc -> \curlyc (wsuipa)
16866 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
16867 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
16868 %* \textrtaild -> \taild (wsuipa)
16869 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
16870 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
16871 %* \texthtd -> \hookd (wsuipa)
16872 %* \texthtd -> \hausad (phonetic)
16873 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
16874 % \textreve (tipa), \reve (wsuipa)
16875 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
16876 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
16877 % \textschwa (tipa), \schwa (wsuipa, phonetic)
16878 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
16879 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
16880 % \textrhookschwa (tipa)
16881 \DeclareTextCommand{\textrhookschwa}{PU}{\82\132}% U+025A

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16882 %* \textrhooksschwa -> \er (wsuipa)
 16883 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 SILON; eopen;
 16884 % \niepsilon (wsuipa)
 16885 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16886 %* \textniepsilon -> \epsi (phonetic)
 16887 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16888 % \textreversedepsilon (tipa), \reversedepsilon (wsuipa)
 16889 \DeclareTextCommand{\textreversedepsilon}{PU}{\82\134}%* U+025C
 16890 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 reversedhook;
 16891 % \textrhookreversedepsilon (tipa)
 16892 \DeclareTextCommand{\textrhookreversedepsilon}{PU}{\82\135}%* U+025D
 16893 %* \textrhookreversedepsilon -> \hookreversedepsilon (wsuipa)
 16894 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16895 % \textclosedreversedepsilon (tipa)
 16896 \DeclareTextCommand{\textclosedreversedepsilon}{PU}{\82\136}% U+025E
 16897 %* \textclosedreversedepsilon -> \closedreversedepsilon (wsuipa)
 16898 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16899 % \textbardotlessj (tipa)
 16900 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16901 %* \textbardotlessj -> \barj (phonetic)
 16902 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16903 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16904 %* \texthtg -> \hookg (wsuipa)
 16905 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16906 % \textscriptg (tipa), \scriptg (wsuipa)
 16907 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16908 %* \textscriptg -> \varg (phonetic)
 16909 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16910 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
 16911 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
 16912 % \ipagamma (wsuipa), \vod (phonetic)
 16913 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
 16914 %* \textipagamma -> \vod (pnonetic)
 16915 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
 16916 % \babygamma (wsuipa)
 16917 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
 16918 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16919 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16920 %* \textturnh -> \invh (wsuipa)
 16921 %* \textturnh -> \udesc (phonetic)
 16922 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16923 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16924 %* \texthth -> \hookh (wsuipa)
 16925 %* \texthth -> \voicedh (phonetic)
 16926 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
 ththeng (tipa)
 16927 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16928 %* \texththeng -> \hookheng (wsuipa)
 16929 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16930 % \textbari (tipa), \bari (wsuipa)
 16931 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
 16932 %* \textbari -> \ibar (phonetic)
 16933 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)

16934 \DeclareTextCommand{\textniota}{PU}{\82\151}%* U+0269
16935 %* \textniota -> \vari (phonetic)
16936 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16937 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16938 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; \lmiddletilde;
16939 % \textltilde (tipa)
16940 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16941 %* \textltilde -> \tildel (wsuipa)
16942 % U+026C LATIN SMALL LETTER L WITH BELT; \lbelt; \textbeltl (tipa)
16943 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16944 %* \textbeltl -> \latfrie (wsuipa)
16945 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16946 % \hookretroflex; \textrtaill (tipa)
16947 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16948 %* \textrtaill -> \taill (wsuipa)
16949 % U+026E LATIN SMALL LETTER LEZH; \lezh; \textlyoghlig (tipa)
16950 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16951 %* \textlyoghlig -> \lz (wsuipa)
16952 % U+026F LATIN SMALL LETTER TURNED M; \mturned; \textturnm (tipa)
16953 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16954 %* \textturnm -> \invm (wsuipa)
16955 %* \textturnm -> \rotm (phonetic)
16956 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; \mlongleg-
turned;
16957 % \textturnmrleg (tipa)
16958 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16959 %* \textturnmrleg -> \legm (wsuipa)
16960 % U+0271 LATIN SMALL LETTER M WITH HOOK; \mhook; \textltailm (tipa)
16961 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16962 %* \textltailm -> \labdentalnas (wsuipa)
16963 %* \textltailm -> \emgma (phonetic)
16964 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; \nhookleft; \textl-
tailn (tipa)
16965 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16966 %* \textltailn -> \nj (wsuipa)
16967 %* \textltailn -> \nya (phonetic)
16968 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16969 % \nhookretroflex; \textrtailn (tipa)
16970 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16971 %* \textrtailn -> \tailn (wsuipa)
16972 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16973 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16974 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16975 % LATIN CAPITAL LETTER BARRED O; \obarred;
16976 % \textbaro (tipa), \baro (wsuipa)
16977 % But \baro from stmaryrd is different!
16978 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16979 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscelig (tipa)
16980 \DeclareTextCommand{\textscelig}{PU}{\82\166}% U+0276
16981 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; \omegalatinclosed;
16982 % \textcloseomega (tipa)
16983 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16984 %* \textcloseomega -> \closedniomega (wsuipa)
16985 %* \textcloseomega -> \varomega (phonetic)
16986 % U+0278 LATIN SMALL LETTER PHI; \philatin; \niphy (wsuipa)
16987 \DeclareTextCommand{\textniphy}{PU}{\82\170}%* U+0278
16988 % U+0279 LATIN SMALL LETTER TURNED R; \rturned; \textturnr (tipa)

16989 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16990 %* \textturnr -> \invr (wsuipa)
16991 %* \textturnr -> \rotr (phonetic)
16992 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16993 % rlonglegturned; \textturnlonglegr (tipa)
16994 \DeclareTextCommand{\textturnlonglegr}{PU}{\82\172}% U+027A
16995 %* \textturnlonglegr -> \invlegr (wsuipa)
16996 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhohturned;
16997 % \textturnrrtail (tipa)
16998 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16999 %* \textturnrrtail -> \tailinvr (wsuipa)
17000 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlonglegr (tipa)
17001 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C
17002 %* \textlonglegr -> \legr (wsuipa)
17003 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoht; \textrtailr (tipa)
17004 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
17005 %* \textrtailr -> \tailr (wsuipa)
17006 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
17007 % \textfishhookr (tipa)
17008 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
17009 %* \textfishhookr -> \flapr (wsuipa)
17010 %* \textfishhookr -> \flap (phonetic)
17011 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
17012 % \textlhtlongi (tipa)
17013 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17014 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17015 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17016 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17017 % \textinvscr (tipa), \invscr (wsuipa)
17018 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
17019 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \texttrails (tipa)
17020 \DeclareTextCommand{\texttrails}{PU}{\82\202}% U+0282
17021 %* \texttrails -> \tails (wsuipa)
17022 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17023 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
17024 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17025 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17026 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17027 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
17028 % \textvibyi (tipa)
17029 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17030 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17031 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17032 %* \textctesh -> \curlyesh (wsuipa)
17033 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17034 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17035 %* \textturnt -> \clickt (wsuipa)
17036 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
17037 % \texttrtailt (tipa)
17038 \DeclareTextCommand{\texttrtailt}{PU}{\82\210}% U+0288
17039 %* \texttrtailt -> \tailt (wsuipa)
17040 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17041 % \textbaru (tipa), \baru (wsuipa)

17042 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
17043 %* \textbaru -> \ubar (phonetic)
17044 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17045 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
17046 %* \textniupsilon -> \rotOmega (phonetic)
17047 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
17048 % \vhook; \textscriptv (tipa), \scriptv (wsuipa)
17049 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
17050 % U+028C LATIN SMALL LETTER TURNED V; \vturned; \textturnv (tipa)
17051 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
17052 %* \textturnv -> \invv (wsuipa)
17053 %* \textturnv -> \pwedge (phonetic)
17054 % U+028D LATIN SMALL LETTER TURNED W; \wturned; \textturnw (tipa)
17055 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
17056 %* \textturnw -> \invw (wsuipa)
17057 %* \textturnw -> \rotw (phonetic)
17058 % U+028E LATIN SMALL LETTER TURNED Y; \yturned; \textturny (tipa)
17059 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
17060 %* \textturny -> \invy (wsuipa)
17061 %* \textturny -> \roty (phonetic)
17062 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17063 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
17064 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; \zretroflex-hook;
17065 % \textrtailz (tipa)
17066 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
17067 %* \textrtailz -> \tailz (wsuipa)
17068 % U+0291 LATIN SMALL LETTER Z WITH CURL; \zcurl; \textctz (tipa)
17069 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17070 %* \textctz -> \curlyz (wsuipa)
17071 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; \ezh;
17072 % \textyogh (tipa), \yogh (wsuipa)
17073 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17074 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
17075 % \ezhcurl; \textctyogh (tipa)
17076 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17077 %* \textctyogh -> \curlyyogh (wsuipa)
17078 % U+0294 LATIN LETTER GLOTTAL STOP; \glottalstop;
17079 % \textglotstop (tipa), \glotstop (wsuipa)
17080 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
17081 %* \textglotstop -> \ejective (wsuipa)
17082 %* \textglotstop -> \glottal (phonetic)
17083 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17084 % LATIN LETTER REVERSED GLOTTAL STOP; \glottalstopreversed;
17085 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17086 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
17087 %* \textrevglotstop -> \reveject (wsuipa)
17088 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; \glottalstopinverted;
17089 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17090 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
17091 % U+0297 LATIN LETTER STRETCHED C; \cstretched; \textstretchc (tipa)
17092 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17093 %* \textstretchc -> \clickc (wsuipa)
17094 %* \textstretchc -> \textstretchcvar (tipx)
17095 % U+0298 LATIN LETTER BILABIAL CLICK; \bilabialclick;

17096 % \textbullseye (tipa)
17097 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17098 %* \textbullseye -> \clickb (wsuipa)
17099 %* \textbullseye -> \textObullseye (tipx)
17100 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17101 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17102 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17103 % \textcloseepsilon (tipa)
17104 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
17105 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17106 % \texthtscg (tipa)
17107 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17108 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
17109 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
17110 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossed-
tail; \textcdj (tipa)
17111 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
17112 %* \textctj -> \textctjvar (tipx)
17113 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
17114 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
17115 %* \textturnk -> \textturnsck (tipx)
17116 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
17117 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
17118 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
17119 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
17120 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
stroke;
17121 % \textbarglotstop (tipa)
17122 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
17123 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
17124 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
versed;
17125 % \textbarrevglotstop (tipa)
17126 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
17127 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
17128 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
17129 %* \textdzlig -> \dz (wsuipa)
17130 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
lig (tipa)
17131 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
17132 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
17133 % \textdctzlig (tipa)
17134 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
17135 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
17136 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
17137 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
17138 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
17139 %* \texttshlig -> \tesh (wsuipa)
17140 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
17141 % \texttctclig (tipa)
17142 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
17143 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
17144 % \textlhtlongy (tipa)
17145 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
17146 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
17147 % \textvibyy (tipa)
17148 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

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17149 % U+02BD MODIFIER LETTER REVERSED COMMA;
17150 % commareversedmod, afi64937; \textrevapostrophe (tipa)
17151 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
17152 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
17153 % \textraiSeglotstop (tipa)
17154 \DeclareTextCommand{\textraiSeglotstop}{PU}{\82\300}% U+02C0
17155 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
17156 % \textlptr (tipa)
17157 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
17158 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
17159 % \textrptr (tipa)
17160 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
17161 % U+02C7 CARON; caron
17162 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
17163 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
17164 % \textprimstress (tipa)
17165 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
17166 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
17167 % \textsecstress (tipa)
17168 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
17169 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
17170 % \textlengthmark (tipa)
17171 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
17172 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangu-
    larhalfmod;
17173 % \texthalflength (tipa)
17174 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
17175 % U+02D8 BREVE; breve
17176 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
17177 % U+02D9 DOT ABOVE; dotaccent
17178 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
17179 % U+02DA RING ABOVE; ring
17180 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
17181 % U+02DB OGONEK; ogonek
17182 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
17183 % U+02DC SMALL TILDE; ilde, *tilde
17184 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
17185 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
17186 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
17187 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
17188 % U+02F3 MODIFIER LETTER LOW RING
17189 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
17190 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
17191 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
17192 % U+02F7 MODIFIER LETTER LOW TILDE
17193 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
17194 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
17195 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
17196 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
17197 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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51.2.8 Combining Diacritical Marks: U+0300 to U+036F

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17198 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravemod
17199 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
17200 % U+0311 COMBINING INVERTED BREVE; breveinvertedmod
17201 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311

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17202 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 17203 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17204 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 17205 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17206 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 17207 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

51.2.9 Greek and Coptic: U+0370 to U+03FF

17208 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17209 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17210 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 17211 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 17212 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 17213 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 17214 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 17215 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 17216 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 17217 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 17218 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 17219 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 17220 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 17221 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 17222 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
 17223 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 17224 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 17225 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 17226 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
 17227 % iotadieresis
 17228 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 17229 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 17230 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 17231 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 17232 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 17233 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
 17234 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 17235 % U+0394 GREEK CAPITAL LETTER DELTA; Delta; \Delta (LaTeX)
 17236 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 17237 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 17238 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 17239 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 17240 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 17241 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 17242 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 17243 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
 17244 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
 17245 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 17246 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 17247 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 17248 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 17249 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
 17250 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
 17251 % U+039C GREEK CAPITAL LETTER MU; Mu
 17252 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 17253 % U+039D GREEK CAPITAL LETTER NU; Nu

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17254 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17255 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17256 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17257 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17258 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17259 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17260 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17261 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17262 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17263 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17264 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17265 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
17266 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17267 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
17268 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17269 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17270 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17271 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17272 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17273 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
17274 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17275 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
17276 % \Omega (LaTeX)
17277 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17278 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17279 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17280 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17281 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
    silondieresis
17282 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17283 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17284 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17285 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
17286 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17287 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
17288 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
17289 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
17290 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
17291 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17292 % AND TONOS; upsilondieresis
17293 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
17294 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17295 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17296 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17297 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17298 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17299 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17300 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17301 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17302 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17303 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17304 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17305 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17306 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17307 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17308 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17309 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8

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17310 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17311 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17312 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17313 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17314 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17315 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17316 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17317 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17318 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17319 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17320 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17321 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17322 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17323 \DeclareTextCommand{\textomicron}{PU}{\83\277}%* U+03BF
17324 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17325 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17326 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17327 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17328 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17329 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17330 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17331 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17332 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17333 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17334 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17335 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17336 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17337 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17338 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17339 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17340 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17341 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17342 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17343 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17344 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17345 \DeclareTextCompositeCommand{\'}{PU}{\textiota}{\83\312}% U+03CA
17346 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
      silondieresis
17347 \DeclareTextCompositeCommand{\'}{PU}{\textupsilon}{\83\313}% U+03CB
17348 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17349 \DeclareTextCompositeCommand{\'}{PU}{\textomicron}{\83\314}% U+03CC
17350 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17351 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17352 \DeclareTextCompositeCommand{\'}{PU}{\textupsilon}{\83\315}% U+03CD
17353 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17354 \DeclareTextCompositeCommand{\'}{PU}{\textomega}{\83\316}% U+03CE
17355 % U+03DA GREEK LETTER STIGMA; Stigmatagreek
17356 \DeclareTextCommand{\textStigmatagreek}{PU}{\83\332}% U+03DA
17357 % U+03DB GREEK SMALL LETTER STIGMA
17358 \DeclareTextCommand{\textstigmatagreek}{PU}{\83\333}% U+03DB
17359 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17360 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17361 % U+03DD GREEK SMALL LETTER DIGAMMA
17362 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17363 %* \textdigammagreek -> \digamma (AmS)
17364 % U+03DE GREEK LETTER KOPPA; Koppagreek
17365 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE

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17366 % U+03DF GREEK SMALL LETTER KOPPA
 17367 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 17368 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 17369 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 17370 % U+03E1 GREEK SMALL LETTER SAMPI
 17371 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
 17372 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
 17373 % \backepsilon (AmS)
 17374 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6

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.

17375 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 17376 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
 17377 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
 17378 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 17379 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
 17380 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
 17381 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
 17382 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
 17383 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
 17384 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
 17385 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
 17386 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
 17387 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
 17388 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
 17389 % Icyrillic, *afii10055
 17390 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
 17391 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
 17392 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
 17393 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
 17394 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
 17395 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
 17396 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
 17397 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
 17398 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 17399 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 17400 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
 17401 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
 17402 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
 17403 \DeclareTextCompositeCommand{'}{PU}{\CYRK}{\84\014}% U+040C
 17404 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
 17405 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
 17406 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
 17407 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
 17408 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
 17409 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
 17410 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
 17411 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
 17412 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
 17413 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
 17414 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
 17415 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
 17416 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
 17417 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
 17418 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413

17419 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
 17420 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
 17421 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
 17422 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
 17423 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
 17424 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
 17425 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
 17426 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
 17427 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
 17428 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
 17429 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
 17430 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
 17431 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
 17432 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
 17433 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
 17434 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
 17435 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
 17436 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
 17437 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
 17438 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
 17439 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
 17440 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
 17441 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
 17442 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
 17443 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
 17444 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
 17445 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
 17446 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
 17447 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
 17448 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
 17449 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
 17450 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
 17451 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
 17452 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
 17453 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
 17454 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
 17455 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
 17456 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
 17457 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
 17458 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
 17459 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
 17460 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
 17461 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
 17462 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
 17463 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
 17464 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
 17465 % Hardsigncyrillic, *afii10044
 17466 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
 17467 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
 17468 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
 17469 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
 17470 % Softsigncyrillic, *afii10046
 17471 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
 17472 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
 17473 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
 17474 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
 17475 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E

17476 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17477 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17478 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17479 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17480 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17481 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17482 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17483 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17484 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17485 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17486 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17487 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17488 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17489 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17490 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
17491 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17492 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17493 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17494 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17495 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17496 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17497 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17498 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17499 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17500 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17501 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17502 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
17503 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17504 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
17505 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17506 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
17507 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17508 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
17509 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17510 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17511 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17512 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
17513 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17514 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
17515 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17516 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
17517 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17518 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
17519 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17520 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
17521 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17522 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
17523 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17524 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
17525 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17526 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
17527 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17528 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
17529 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17530 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
17531 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic

17532 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
17533 %* \cyrhrdsn -> \hardsign (tipa)
17534 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17535 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
17536 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17537 \DeclareTextCommand{\cyrstfn}{PU}{\84\114}% U+044C
17538 %* \cyrstfn -> \softsign (tipa)
17539 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17540 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
17541 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17542 \DeclareTextCommand{\cyreru}{PU}{\84\116}% U+044E
17543 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17544 \DeclareTextCommand{\cyrer}{PU}{\84\117}% U+044F
17545 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17546 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
17547 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17548 \DeclareTextCommand{\cyrer}{PU}{\84\121}% U+0451
17549 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\121}% U+0451
17550 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17551 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17552 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17553 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17554 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17555 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17556 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17557 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17558 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17559 % *afii10103, icyrillic
17560 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17561 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17562 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17563 \DeclareTextCompositeCommand{\'}{PU}{\cyrii}{\84\127}% U+0457
17564 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17565 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17566 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17567 \DeclareTextCommand{\cyrle}{PU}{\84\131}% U+0459
17568 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17569 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17570 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17571 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17572 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17573 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17574 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17575 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17576 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17577 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17578 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17579 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17580 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17581 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17582 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17583 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17584 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17585 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17586 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17587 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17588 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463

17589 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17590 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17591 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17592 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17593 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
17594 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17595 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
17596 \DeclareTextCommand{\cyrljus}{PU}{\84\147}% U+0467
17597 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17598 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17599 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleioti-
fiedcyrillic
17600 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17601 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17602 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17603 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17604 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17605 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17606 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
17607 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic
17608 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
17609 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
17610 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
17611 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
17612 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
17613 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
17614 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
17615 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
17616 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
17617 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
17618 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
17619 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
17620 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
17621 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
17622 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
17623 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
17624 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
17625 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
17626 % GRAVE ACCENT; Izhitsadblgravecyrillic
17627 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
17628 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
17629 % GRAVE ACCENT; izhitsadblgravecyrillic
17630 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
17631 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
17632 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
17633 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
17634 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
17635 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
lic
17636 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
17637 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
17638 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
17639 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
locyrillic

17640 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17641 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-cyrillic
 17642 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17643 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17644 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17645 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17646 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17647 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17648 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17649 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17650 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17651 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17652 \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; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17653 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17654 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17655 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17656 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17657 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17658 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17659 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17660 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17661 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17662 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17663 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17664 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17665 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 17666 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17667 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 17668 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17669 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 17670 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17671 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17672 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17673 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17674 % Ghemiddlehookcyrillic
 17675 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17676 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17677 % ghemiddlehookcyrillic
 17678 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17679 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17680 % Zhedescendercyrillic
 17681 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496

17682 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
17683 % zhedescendercyrillic
17684 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
17685 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
17686 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
17687 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
17688 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
17689 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
17690 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
17691 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadesendercyrillic
17692 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
17693 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadesendercyrillic
17694 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
17695 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
17696 % Kavertikalstrokecyrillic
17697 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
17698 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
17699 % kavertikalstrokecyrillic
17700 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
17701 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
17702 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
17703 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
17704 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
17705 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
17706 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
17707 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
17708 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
17709 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
17710 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
17711 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
17712 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
17713 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
17714 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
17715 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
17716 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
17717 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
17718 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
17719 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
17720 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
17721 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
17722 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
17723 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
17724 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
17725 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
17726 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
17727 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
17728 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-

cyrillic

17729 \DeclareTextCommand{\cyrstdsc}{PU}{\84\253}% U+04AB

17730 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB

17731 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic

17732 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC

17733 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic

17734 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD

17735 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic

17736 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE

17737 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic

17738 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF

17739 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic

17740 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0

17741 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic

17742 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1

17743 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesendercyrillic

17744 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2

17745 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic

17746 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3

17747 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic

17748 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4

17749 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic

17750 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5

17751 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;

17752 % Chedescendercyrillic

17753 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6

17754 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic

17755 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7

17756 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;

17757 % Cheverticalstrokecyrillic

17758 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8

17759 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;

17760 % cheverticalstrokecyrillic

17761 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9

17762 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic

17763 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA

17764 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic

17765 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB

17766 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic

17767 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC

17768 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic

17769 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD

17770 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic

17771 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE

17772 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE

17773 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic

17774 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
17775 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
17776 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17777 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17778 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17779 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17780 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17781 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
17782 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
17783 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
17784 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
17785 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
17786 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
17787 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
17788 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
17789 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
17790 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
17791 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
17792 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
17793 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
17794 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
siancyrillic
17795 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
17796 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
cyrillic
17797 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
17798 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
17799 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
17800 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
17801 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
17802 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
17803 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
17804 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
17805 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
17806 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
lic
17807 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
17808 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
17809 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
17810 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
17811 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
17812 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
17813 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
17814 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
17815 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
17816 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
17817 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
17818 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
17819 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
17820 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
17821 \DeclareTextCommand{\cyrschw}{PU}{\84\331}% U+04D9
17822 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
17823 % Schwadieresiscyrillic
17824 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
17825 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
17826 % schwadieresiscyrillic

17827 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
17828 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
17829 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
17830 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
17831 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\335}% U+04DD
17832 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
17833 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
17834 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
17835 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
17836 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
17837 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
17838 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
17839 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
17840 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Iacroncyrillic
17841 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2
17842 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; iacroncyrillic
17843 \DeclareTextCompositeCommand{=}{PU}{\cyri}{\84\343}% U+04E3
17844 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
17845 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
17846 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
17847 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
17848 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
17849 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
17850 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
17851 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
17852 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
17853 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
17854 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
17855 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
17856 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
17857 % Obarreddieresiscyrillic
17858 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
17859 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
17860 % obarreddieresiscyrillic
17861 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
17862 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
17863 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
17864 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
17865 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
17866 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
17867 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
17868 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
17869 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
17870 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
17871 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
17872 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17873 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
17874 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic

17875 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 17876 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 17877 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 17878 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 17879 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 17880 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
 iscyrillic
 17881 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 17882 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 17883 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 17884 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 17885 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 17886 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 17887 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 17888 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 17889 \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
 17890 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 17891 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 17892 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 17893 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

17894 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
 17895 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
 17896 % U+05D0 HEBREW LETTER ALEF
 17897 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
 17898 % U+05D1 HEBREW LETTER BET
 17899 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
 17900 % U+05D2 HEBREW LETTER GIMEL
 17901 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
 17902 % U+05D3 HEBREW LETTER DALET
 17903 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
 17904 % U+05D4 HEBREW LETTER HE
 17905 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
 17906 % U+05D5 HEBREW LETTER VAV
 17907 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
 17908 % U+05D6 HEBREW LETTER ZAYIN
 17909 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
 17910 % U+05D7 HEBREW LETTER HET
 17911 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
 17912 % U+05D8 HEBREW LETTER TET
 17913 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
 17914 % U+05D9 HEBREW LETTER YOD
 17915 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9

17916 % U+05DA HEBREW LETTER FINAL KAF
 17917 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
 17918 % U+05DB HEBREW LETTER KAF
 17919 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
 17920 % U+05DC HEBREW LETTER LAMED
 17921 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
 17922 % U+05DD HEBREW LETTER FINAL MEM
 17923 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
 17924 % U+05DE HEBREW LETTER MEM
 17925 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 17926 % U+05DF HEBREW LETTER FINAL NUN
 17927 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17928 % U+05E0 HEBREW LETTER NUN
 17929 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
 17930 % U+05E1 HEBREW LETTER SAMEKH
 17931 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17932 % U+05E2 HEBREW LETTER AYIN
 17933 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17934 % U+05E3 HEBREW LETTER FINAL PE
 17935 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17936 % U+05E4 HEBREW LETTER PE
 17937 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17938 % U+05E5 HEBREW LETTER FINAL TSADI
 17939 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17940 % U+05E6 HEBREW LETTER TSADI
 17941 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17942 % U+05E7 HEBREW LETTER QOF
 17943 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17944 % U+05E8 HEBREW LETTER RESH
 17945 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17946 % U+05E9 HEBREW LETTER SHIN
 17947 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17948 %* \hebshin -> \hebsin (he8)
 17949 % U+05EA HEBREW LETTER TAV
 17950 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17951 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17952 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17953 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17954 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17955 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17956 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17957 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17958 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17959 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsca (tipa)
 17960 \DeclareTextCommand{\textsca}{PU}{\9035\000}% U+1D00
 17961 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17962 \DeclareTextCommand{\textscd}{PU}{\9035\005}%* U+1D05
 17963 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 17964 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 17965 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 17966 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 17967 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscck (tipx)


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17968 \DeclareTextCommand{\textPUscck}{PU}{\9035\013}% U+1D0B
17969 %* \textPUscck -> \textscck (tipx)
17970 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
17971 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
17972 %* \textPUscm -> \textscm (tipx)
17973 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
17974 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
17975 %* \textPUscp -> \textscp (tipx)
17976 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
17977 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
17978 %* \textPUrevscr -> \textrevscr (tipx)
17979 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
17980 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
17981 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
17982 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
17983 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
17984 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
17985 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
17986 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
17987 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
17988 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
17989 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
17990 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
17991 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
17992 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
17993 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
17994 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
17995 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
17996 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
17997 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
17998 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
17999 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
18000 % \barsci (wsuipa)
18001 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
18002 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
18003 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
18004 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
18005 % \barscu (wsuipa)
18006 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

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51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

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18007 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
      trhooka (tipx)
18008 \DeclareTextCommand{\textPUrhooka}{PU}{\9035\217}% U+1D8F
18009 %* \textPUrhooka -> \textrhooka (tipx)
18010 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
      taild (tipa)
18011 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
18012 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
      trhooke (tipx)
18013 \DeclareTextCommand{\textPUrhooke}{PU}{\9035\222}% U+1D92
18014 %* \textPUrhooke -> \textrhooke (tipx)
18015 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
18016 % \textrhookepsilon (tipx)
18017 \DeclareTextCommand{\textPUrhookepsilon}{PU}{\9035\223}% U+1D93
18018 %* \textPUrhookepsilon -> \textrhookepsilon (tipx)
18019 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;

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18020 % \textrhookopeno (tipx)
 18021 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 18022 %* \textPURhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18023 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 18024 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 18025 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
 18026 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
 18027 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 18028 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 18029 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 18030 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 18031 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
 18032 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
 18033 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
 18034 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
 18035 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 18036 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 18037 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 18038 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 18039 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 18040 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
 18041 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 18042 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
 18043 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
 18044 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
 18045 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
 18046 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
 18047 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 18048 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 18049 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 18050 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 18051 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 18052 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 18053 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 18054 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 18055 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
 cumflexbelow
 18056 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
 18057 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
 cumflexbelow
 18058 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
 18059 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
 18060 % Emacrongrave
 18061 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
 18062 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
 18063 % emacrongrave
 18064 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
 18065 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
 18066 % Emacronacute
 18067 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
 18068 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
 18069 % emacronacute
 18070 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
 18071 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
 cumflexbelow

18072 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18073 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18074 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18075 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18076 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18077 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18078 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
18079 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
18080 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
18081 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
18082 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
18083 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
18084 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
18085 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
18086 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
18087 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
18088 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
18089 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
18090 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
18091 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
18092 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
18093 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
18094 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18095 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18096 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
18097 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18098 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
18099 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18100 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18101 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18102 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
18103 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
18104 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
18105 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
18106 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
18107 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
18108 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
18109 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
18110 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
18111 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
18112 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
18113 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
18114 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
18115 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
18116 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
18117 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
18118 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
18119 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
18120 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
18121 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
18122 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
18123 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
18124 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
18125 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
18126 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
18127 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow

18128 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
18129 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
18130 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
18131 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
18132 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
18133 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
18134 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
18135 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
18136 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
18137 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
18138 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
18139 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
18140 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
18141 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
18142 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
18143 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
18144 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
18145 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
18146 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
18147 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
18148 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
18149 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
18150 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
18151 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
18152 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
18153 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
18154 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
18155 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
18156 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
18157 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
18158 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
18159 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
18160 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
18161 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
18162 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
18163 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
18164 % Omacrongrave
18165 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
18166 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
18167 % omacrongrave
18168 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
18169 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
18170 % Omacronacute
18171 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
18172 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
18173 % omacronacute
18174 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
18175 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
18176 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
18177 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
18178 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
18179 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
18180 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56

18181 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
18182 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
18183 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
18184 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
18185 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
18186 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
18187 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
18188 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
18189 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
18190 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
18191 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
18192 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
18193 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
18194 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
18195 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
18196 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
18197 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
18198 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
18199 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
18200 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
18201 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
18202 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
18203 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
18204 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
18205 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
18206 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
18207 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
18208 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
18209 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
18210 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
18211 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
18212 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
18213 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
18214 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
18215 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
cumflexbelow
18216 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
18217 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
cumflexbelow
18218 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
18219 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
sisbelow
18220 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
18221 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
sisbelow
18222 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
18223 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
18224 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
18225 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
18226 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
18227 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
cumflexbelow
18228 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
18229 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
cumflexbelow
18230 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
18231 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde

18232 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
18233 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
18234 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
18235 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
18236 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
18237 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
18238 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
18239 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
18240 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
18241 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
18242 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
18243 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
18244 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
18245 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
18246 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
18247 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
18248 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
18249 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
18250 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
18251 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
18252 \DeclareTextCompositeCommand{.}{PU}{W}{\9036\206}% U+1E86
18253 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
18254 \DeclareTextCompositeCommand{.}{PU}{w}{\9036\207}% U+1E87
18255 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; Wdotbelow
18256 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
18257 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
18258 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
18259 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
18260 \DeclareTextCompositeCommand{.}{PU}{X}{\9036\212}% U+1E8A
18261 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
18262 \DeclareTextCompositeCommand{.}{PU}{x}{\9036\213}% U+1E8B
18263 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
18264 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
18265 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
18266 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
18267 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
18268 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
18269 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
18270 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
18271 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
18272 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
18273 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
18274 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
18275 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
18276 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
18277 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
18278 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
18279 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18280 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
18281 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18282 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
18283 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18284 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
18285 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18286 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
18287 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18288 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98

18289 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 18290 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 18291 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
 taccent
 18292 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 18293 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
 18294 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 18295 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
 18296 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 18297 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 18298 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 18299 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 18300 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 18301 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 18302 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 18303 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 18304 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 18305 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 18306 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 18307 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 18308 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 18309 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 18310 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 18311 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18312 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 18313 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18314 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 18315 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18316 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18317 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18318 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 18319 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18320 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 18321 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18322 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18323 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18324 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18325 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18326 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18327 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18328 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18329 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18330 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18331 % U+2013 EN DASH; endash
 18332 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18333 % U+2014 EM DASH; emdash
 18334 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18335 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18336 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18337 %* \textbardbl -> \textdoublevertline (tipa)
 18338 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18339 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18340 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18341 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18342 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase

18343 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
18344 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
18345 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
18346 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
18347 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
18348 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
18349 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
18350 % U+2020 DAGGER; dagger
18351 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
18352 %* \textdagger -> \dag (LaTeX)
18353 % U+2021 DOUBLE DAGGER; daggerdbl; ddagger (LaTeX)
18354 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
18355 %* \textdaggerdbl -> \ddagger (LaTeX)
18356 %* \textdaggerdbl -> \ddag (LaTeX)
18357 % U+2022 BULLET; bullet
18358 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
18359 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
18360 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
18361 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
18362 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
18363 %* \textellipsis -> \mathellipsis
18364 % U+2030 PER MILLE SIGN; perthousand
18365 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
18366 % U+2031 PER TEN THOUSAND SIGN
18367 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
18368 % U+2032 PRIME; minute; \prime (MnSymbol)
18369 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
18370 % U+2033 DOUBLE PRIME; \second (mathabx)
18371 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
18372 % U+2034 TRIPLE PRIME; \third (mathabx)
18373 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
18374 % U+2035 REVERSED PRIME; \backprime (AmS)
18375 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
18376 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
18377 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
18378 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
ingright
18379 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
18380 % U+203B REFERENCE MARK; referencemark
18381 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
18382 % U+203D INTERROBANG
18383 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
18384 % U+2044 FRACTION SLASH; fraction
18385 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
18386 % U+2045 LEFT SQUARE BRACKET WITH QUILL
18387 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
18388 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
18389 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
18390 % U+2052 COMMERCIAL MINUS SIGN
18391 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
18392 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
18393 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
18394 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
18395 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
18396 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
18397 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18398 % U+2070 SUPERSCRIPT ZERO; zerosuperior
18399 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
18400 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
18401 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
18402 % U+2074 SUPERSCRIPT FOUR; foursuperior
18403 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
18404 % U+2075 SUPERSCRIPT FIVE; fivesuperior
18405 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
18406 % U+2076 SUPERSCRIPT SIX; sixsuperior
18407 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
18408 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
18409 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
18410 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
18411 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
18412 % U+2079 SUPERSCRIPT NINE; ninesuperior
18413 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
18414 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
18415 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
18416 % U+207B SUPERSCRIPT MINUS
18417 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
18418 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
18419 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
18420 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
18421 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
18422 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
18423 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
18424 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
18425 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
18426 % U+2080 SUBSCRIPT ZERO; zeroinferior
18427 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
18428 % U+2081 SUBSCRIPT ONE; oneinferior
18429 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
18430 % U+2082 SUBSCRIPT TWO; twoinferior
18431 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
18432 % U+2083 SUBSCRIPT THREE; threeinferior
18433 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
18434 % U+2084 SUBSCRIPT FOUR; fourinferior
18435 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
18436 % U+2085 SUBSCRIPT FIVE; fiveinferior
18437 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
18438 % U+2086 SUBSCRIPT SIX; sixinferior
18439 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
18440 % U+2087 SUBSCRIPT SEVEN; seveninferior
18441 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
18442 % U+2088 SUBSCRIPT EIGHT; eightinferior
18443 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
18444 % U+2089 SUBSCRIPT NINE; nineinferior
18445 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
18446 % U+208A SUBSCRIPT PLUS SIGN
18447 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
18448 % U+208B SUBSCRIPT MINUS
18449 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
18450 % U+208C SUBSCRIPT EQUALS SIGN
18451 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
18452 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
18453 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D

18454 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18455 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18456 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18457 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18458 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18459 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18460 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
 18461 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18462 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18463 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18464 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18465 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18466 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18467 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18468 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18469 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18470 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18471 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18472 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18473 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18474 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18475 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18476 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18477 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18478 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18479 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18480 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18481 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18482 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18483 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18484 % U+20A4 LIRA SIGN; afi08941, *lira
 18485 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18486 % U+20A6 NAIRA SIGN
 18487 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18488 % U+20A7 PESETA SIGN; peseta
 18489 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18490 % U+20A9 WON SIGN; won
 18491 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18492 % U+20AB DONG SIGN; dong
 18493 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18494 % U+20AC EURO SIGN; *Euro, euro
 18495 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18496 %* \texteuro -> \EurDig (marvosym)
 18497 %* \texteuro -> \EURdig (marvosym)
 18498 %* \texteuro -> \EurHv (marvosym)
 18499 %* \texteuro -> \EURhv (marvosym)
 18500 %* \texteuro -> \EurCr (marvosym)
 18501 %* \texteuro -> \EURcr (marvosym)
 18502 %* \texteuro -> \EurTm (marvosym)
 18503 %* \texteuro -> \EURtm (marvosym)
 18504 %* \texteuro -> \Eur (marvosym)
 18505 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18506 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18507 %* \textDeleatur -> \Denarius (marvosym)
 18508 % U+20B1 PESO SIGN

18509 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18510 % U+20B2 GUARANI SIGN
 18511 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18512 % U+2103 DEGREE CELSIUS; centigrade
 18513 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 18514 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18515 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18516 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18517 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18518 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18519 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18520 % U+2116 NUMERO SIGN; *afii61352, numero
 18521 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18522 % U+2117 SOUND RECORDING COPYRIGHT
 18523 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18524 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18525 % weierstrass; \wp (LaTeX)
 18526 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18527 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18528 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18529 % U+211E PRESCRIPTION TAKE; prescription
 18530 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18531 % U+2120 SERVICE MARK
 18532 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18533 % U+2122 TRADE MARK SIGN; trademark
 18534 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18535 % U+2126 OHM SIGN; Ohm, Omega
 18536 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 18537 % U+2127 INVERTED OHM SIGN
 18538 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18539 %* \textmho -> \agemO (wasysym)
 18540 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18541 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18542 % U+212B ANGSTROM SIGN; angstrom
 18543 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18544 % U+212E ESTIMATED SYMBOL; estimated
 18545 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18546 %* \textestimated -> \EstimatedSign (marvosym)
 18547 %* \textestimated -> \Ecommerce (marvosym)
 18548 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18549 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18550 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18551 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18552 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18553 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18554 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18555 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18556 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18557 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18558 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18559 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18560 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18561 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18562 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)

18563 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18564 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18565 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18566 % U+2150 VULGAR FRACTION ONE SEVENTH
 18567 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18568 % U+2151 VULGAR FRACTION ONE NINTH
 18569 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18570 % U+2152 VULGAR FRACTION ONE TENTH
 18571 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18572 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18573 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18574 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18575 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18576 % U+2155 VULGAR FRACTION ONE FIFTH
 18577 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18578 % U+2156 VULGAR FRACTION TWO FIFTHS
 18579 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18580 % U+2157 VULGAR FRACTION THREE FIFTHS
 18581 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18582 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18583 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18584 % U+2159 VULGAR FRACTION ONE SIXTH
 18585 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18586 % U+215A VULGAR FRACTION FIVE SIXTHS
 18587 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18588 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18589 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18590 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18591 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18592 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18593 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18594 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18595 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18596 % U+2184 LATIN SMALL LETTER REVERSED C
 18597 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18598 % U+2189 VULGAR FRACTION ZERO THIRDS
 18599 \DeclareTextCommand{\textzerthirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18600 % U+2190 LEFTWARDS ARROW; arrowleft
 18601 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18602 % U+2191 UPWARDS ARROW; arrowup
 18603 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18604 % U+2192 RIGHTWARDS ARROW; arrowright
 18605 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18606 %* \textrightarrow -> \MVRightArrow (marvosym)
 18607 %* \textrightarrow -> \MVRightarrow (marvosym)
 18608 % U+2193 DOWNWARDS ARROW; arrowdown
 18609 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18610 %* \textdownarrow -> \MVAArrowDown (marvosym)
 18611 %* \textdownarrow -> \Force (marvosym)
 18612 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18613 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18614 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18615 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195

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18616 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
18617 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
18618 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
18619 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
18620 %* \textnearrow -> \textglobrise (tipa)
18621 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
18622 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
18623 %* \textsearrow -> \textglobfall (tipa)
18624 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18625 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18626 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
18627 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18628 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
18629 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18630 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18631 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18632 % \twoheadleftarrow (txfonts/pxfonts)
18633 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18634 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18635 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18636 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18637 % \twoheadrightarrow (AmS)
18638 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18639 % \twoheadrightarrow (txfonts/pxfonts)
18640 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18641 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
18642 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18643 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18644 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18645 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18646 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18647 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18648 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18649 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18650 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18651 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18652 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18653 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18654 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18655 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18656 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18657 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
18658 \DeclareTextCommand{\textnleftrightarrow}{PU}{\9041\256}%* U+21AE
18659 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18660 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18661 %* \textlightning -> \Lightning (marvosym)
18662 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18663 % \dls (mathabx)
18664 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18665 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18666 % \curvearrowleft (AmS)
18667 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18668 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18669 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18670 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;

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18671 % \leftharpoonup (LaTeX)
18672 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18673 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18674 % \leftharpoondown (LaTeX)
18675 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18676 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18677 % \upharpoonright (AmS)
18678 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18679 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18680 % \upharpoonleft (AmS)
18681 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18682 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
    barbup
18683 % \rightharpoonup (LaTeX)
18684 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18685 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18686 % \rightharpoondown (LaTeX)
18687 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18688 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18689 % \downharpoonright (AmS)
18690 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18691 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18692 % \downharpoonleft (AmS)
18693 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18694 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18695 % \arrowrightoverleft; \rightleftarrows (MnSymbol)
18696 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18697 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
    rowupleftofdown;
18698 % \updownarrows (MnSymbol)
18699 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18700 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
    overright;
18701 % \leftrightarrows (AmS)
18702 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18703 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18704 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18705 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18706 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18707 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18708 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18709 % U+21CA DOWNWARDS PAIRED ARROWS; \downarrows (AmS)
18710 \DeclareTextCommand{\textdownarrows}{PU}{\9041\312}%* U+21CA
18711 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18712 % \leftrightharpoons (AmS);
18713 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18714 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18715 % \rightleftharpoons (LaTeX, AmS)
18716 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18717 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
    blstroke;
18718 % \nLeftarrow (AmS)
18719 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18720 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightar-
    row (AmS)
18721 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18722 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-

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blstroke;
18723 % \nrightarrow (AmS)
18724 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\317}%* U+21CF
18725 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18726 % \Leftarrow (LaTeX)
18727 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18728 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18729 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18730 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18731 % \Rightarrow (LaTeX)
18732 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
18733 %* \textRightarrow -> \Conclusion (marvosym)
18734 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
18735 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18736 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18737 % \Leftrightarrow (LaTeX)
18738 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18739 %* \textLeftrightarrow -> \Equivalence (marvosym)
18740 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18741 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18742 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18743 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18744 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18745 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18746 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18747 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18748 % U+21D9 SOUTH WEST DOUBLE ARROW; \Svarrow (MnSymbol)
18749 \DeclareTextCommand{\textSvarrow}{PU}{\9041\331}%* U+21D9
18750 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18751 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18752 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18753 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18754 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18755 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18756 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18757 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18758 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18759 % \dashleftarrow (AmS)
18760 \DeclareTextCommand{\texdashleftarrow}{PU}{\9041\340}%* U+21E0
18761 %* \texdashleftarrow -> \dashedleftarrow (MnSymbol)
18762 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (MnSymbol)
18763 \DeclareTextCommand{\texdasheduparrow}{PU}{\9041\341}%* U+21E1
18764 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow (AmS)
18765 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\342}%* U+21E2
18766 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
18767 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow (MnSymbol)
18768 \DeclareTextCommand{\texdasheddownarrow}{PU}{\9041\343}%* U+21E3
18769 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18770 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18771 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18772 % \downuparrows (MnSymbol)
18773 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18774 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)

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18775 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18776 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18777 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18778 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightharrowtriangle (stmaryrd)
18779 \DeclareTextCommand{\textleftrightharrowtriangle}{PU}{\9041\377}%* U+21FF

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51.2.22 Mathematical Operators: U+2200 to U+22FF

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18780 % U+2200 FOR ALL; forall; \forall (LaTeX)
18781 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18782 % U+2201 COMPLEMENT; \complement (AmS)
18783 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18784 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18785 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18786 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18787 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18788 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18789 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18790 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18791 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18792 %* \textemptyset -> \varnothing (AmS)
18793 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18794 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18795 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18796 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18797 % U+2208 ELEMENT OF; element; \in (LaTeX)
18798 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18799 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18800 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18801 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18802 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18803 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18804 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18805 %* \textni -> \owns (mathabx)
18806 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18807 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18808 %* \textnotowner -> \notni (txfonts/pxfonts)
18809 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18810 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18811 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18812 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18813 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18814 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18815 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18816 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18817 % U+2212 MINUS SIGN; minus
18818 \DeclareTextCommand{\textminus}{PU}{\9042\022}%* U+2212
18819 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18820 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18821 % U+2214 DOT PLUS; \dotplus (AmS)
18822 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18823 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18824 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18825 % \DividesNot (marvosym)
18826 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18827 % U+2216 SET MINUS; \setminus (LaTeX)
18828 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216

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18829 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18830 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18831 % U+2218 RING OPERATOR; \circ (LaTeX)
18832 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18833 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18834 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18835 % U+221A SQUARE ROOT; radical
18836 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18837 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18838 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18839 %* \textpropto -> \varprop (wasysym)
18840 % U+221E INFINITY; infinity; \infty (LaTeX)
18841 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18842 % U+2220 ANGLE; angle; \angle (LaTeX)
18843 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18844 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18845 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18846 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18847 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18848 %* \textsphericalangle -> \varangle (wasysym)
18849 %* \textsphericalangle -> \Anglesign (marvosym)
18850 %* \textsphericalangle -> \AngleSign (marvosym)
18851 % U+2223 DIVIDES; divides; \mid (LaTeX)
18852 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18853 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18854 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18855 %* \textnmid -> \notdivides (mathabx)
18856 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18857 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18858 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18859 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18860 %* \textnparallel -> nUpdownline (MnSymbol)
18861 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18862 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18863 % \owedge (stmaryrd)
18864 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18865 %* \textowedge -> \varowedge (stmaryrd)
18866 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18867 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18868 % \ovee (stmaryrd)
18869 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18870 %* \textovee -> \varovee (stmaryrd)
18871 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18872 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18873 % U+222A UNION; union; \cup (LaTeX)
18874 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18875 % U+222B INTEGRAL; integral; \int (LaTeX)
18876 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18877 %* \textint -> \varint (wasysym)
18878 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18879 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18880 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18881 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18882 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18883 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18884 %* \textoint -> \varoint (wasysym)
18885 % U+222F SURFACE INTEGRAL; \oiint (wasysym)

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18886 \DeclareTextCommand{\textoint}{PU}{\9042\057}%* U+222F
18887 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18888 % \ointclockwise (txfonts/pxfonts)
18889 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18890 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrckwise (tx-
      fonts/pxfonts)
18891 \DeclareTextCommand{\textointctrckwise}{PU}{\9042\063}%* U+2233
18892 % U+2234 THEREFORE; therefore; \therefore (AmS)
18893 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18894 %* \texttherefore -> uptherefore (MnSymbol)
18895 % U+2235 BECAUSE; because; \because (AmS)
18896 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18897 %* \textbecause -> \downtherefore (MnSymbol)
18898 % U+2236 RATIO; \vdotdot (MnSymbol)
18899 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18900 % U+2237 PROPORTION; \squaredots (MnSymbol)
18901 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18902 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18903 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18904 %* \textdotminus -> \textdotdiv (mathabx)
18905 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18906 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18907 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18908 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18909 %* \textsim -> \AC (wasysym)
18910 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18911 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18912 % \nbacksim (txfonts/pxfonts)
18913 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18914 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18915 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18916 %* \textwr -> \wreath (MnSymbol)
18917 % U+2241 NOT TILDE; \nsim (AmS)
18918 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18919 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18920 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18921 % \neqsim (MnSymbol)
18922 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18923 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
      TeX)
18924 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18925 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18926 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18927 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18928 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18929 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18930 % \ncong (AmS)
18931 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18932 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18933 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18934 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18935 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18936 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18937 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18938 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18939 % \napproxeq (txfonts/pxfonts)
18940 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338

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18941 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
 18942 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
 18943 %* \texttriplesim -> \VHF (wasysym)
 18944 % \ntriplesim (MnSymbol)
 18945 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
 18946 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
 18947 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
 18948 % \nbackcong (MnSymbol)
 18949 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
 18950 % U+224D EQUIVALENT TO; \asymp (LaTeX)
 18951 \DeclareTextCommand{\textasymp}{PU}{\9042\115}%* U+224D
 18952 % \nasympt (txfonts/pxfonts)
 18953 \DeclareTextCommand{\textnasympt}{PU}{\9042\115\83\070}%* U+224D U+0338
 18954 %* \textnasympt -> \notasympt (mathabx)
 18955 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
 18956 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
 18957 % \nBumpeq (txfonts/pxfonts)
 18958 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
 18959 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
 18960 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
 18961 % \nbumpeq (txfonts/pxfonts)
 18962 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
 18963 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
 18964 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
 18965 % \ndoteq (MnSymbol)
 18966 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
 18967 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
 18968 % \doteqdot (AmS)
 18969 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
 18970 %* \textdoteqdot -> \Doteq (MnSymbol)
 18971 % \nDoteq (MnSymbol)
 18972 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
 18973 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
 equalorimage;
 18974 % \fallingdotseq (AmS)
 18975 \DeclareTextCommand{\textfallingdotseq}{PU}{\9042\122}%* U+2252
 18976 % \nfallingdotseq (MnSymbol)
 18977 \DeclareTextCommand{\textnfallingdotseq}{PU}{\9042\122\83\070}%* U+2252 U+0338
 18978 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapprox-
 imatelyequal;
 18979 % \risingdotseq (AmS)
 18980 \DeclareTextCommand{\textrisingdotseq}{PU}{\9042\123}%* U+2253
 18981 % \nrisingdotseq (MnSymbol)
 18982 \DeclareTextCommand{\textnrisingdotseq}{PU}{\9042\123\83\070}%* U+2253 U+0338
 18983 % U+2254 COLON EQUALS; \colonequals (colonequals)
 18984 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
 18985 % U+2255 EQUALS COLON; \equalscolon (colonequals)
 18986 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
 18987 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
 18988 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
 18989 % \neqcirc (MnSymbol)
 18990 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
 18991 % U+2257 RING EQUAL TO; \circeq (AmS)
 18992 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
 18993 % \ncirceq (MnSymbol)
 18994 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
 18995 % U+2259 ESTIMATES; \hateq (MnSymbol)

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18996 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
18997 %* \texthateq -> \corresponds (mathabx)
18998 %* \texthateq -> \Corresponds (marvosym)
18999 % \nhateq (MnSymbol)
19000 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
19001 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
19002 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
19003 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
19004 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
19005 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
19006 %* \textneq -> \nequal (MnSymbol)
19007 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
19008 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
19009 %* \textequiv -> \Congruent (marvosym)
19010 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
19011 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
19012 %* \textnequiv -> \NotCongruent (marvosym)
19013 %* \textnequiv -> \notequiv (mathabx)
19014 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
19015 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
19016 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
19017 %* \textleq -> \LessOrEqual (marvosym)
19018 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
19019 % \ge (LaTeX), \geq (LaTeX)
19020 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
19021 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
19022 %* \textgeq -> \LargerOrEqual (marvosym)
19023 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
19024 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
19025 % \nleqq (txfonts/pxfonts)
19026 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
19027 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
19028 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
19029 % \ngeqq (txfonts/pxfonts)
19030 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
19031 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
19032 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
19033 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
19034 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
19035 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
19036 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
19037 % \nll (txfonts/pxfonts)
19038 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
19039 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
19040 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
19041 % \ngg (txfonts/pxfonts)
19042 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
19043 % U+226C BETWEEN; \between (AmS)
19044 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
19045 % U+226E NOT LESS-THAN; notless; \nless (AmS)
19046 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
19047 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
19048 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
19049 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
19050 % \nleq (AmS)
19051 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
19052 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternore-

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qual; \ngeq (AmS)

19053 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271

19054 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lessim (AmS)

19055 \DeclareTextCommand{\textlessim}{PU}{\9042\162}%* U+2272

19056 %* \textlessim -> \apprle (wasysym)

19057 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)

19058 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273

19059 %* \textgtrsim -> \apprge (wasysym)

19060 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-fonts/pxfonts)

19061 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274

19062 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-fonts/pxfonts)

19063 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275

19064 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)

19065 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276

19066 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)

19067 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277

19068 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-fonts/pxfonts)

19069 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278

19070 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-fonts/pxfonts)

19071 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279

19072 % U+227A PRECEDES; precedes; \prec (LaTeX)

19073 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A

19074 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)

19075 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B

19076 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)

19077 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C

19078 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)

19079 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D

19080 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)

19081 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E

19082 % \nprecsim (txfonts/pxfonts)

19083 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338

19084 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)

19085 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F

19086 % \nsuccsim (txfonts/pxfonts)

19087 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338

19088 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)

19089 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280

19090 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)

19091 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281

19092 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)

19093 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282

19094 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)

19095 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283

19096 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)

19097 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284

19098 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)

19099 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285

19100 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)

19101 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286

19102 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)

19103 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287

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19104 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
19105 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
19106 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
19107 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
19108 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subsetneq (AmS)
19109 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
19110 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supsetneq (AmS)
19111 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
19112 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
19113 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
19114 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
19115 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
19116 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
19117 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
19118 % \nsqsubset (txfonts/pxfonts)
19119 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
19120 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
19121 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
19122 % \nsqsupset (txfonts/pxfonts)
19123 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
19124 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseq (LaTeX)
19125 \DeclareTextCommand{\textsqsubseq}{PU}{\9042\221}%* U+2291
19126 % \nsqsubseq (txfonts/pxfonts)
19127 \DeclareTextCommand{\textnsqsubseq}{PU}{\9042\221\83\070}%* U+2291 U+0338
19128 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
19129 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
19130 % \nsqsupseteq (txfonts/pxfonts)
19131 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
19132 % U+2293 SQUARE CAP; \sqcap (LaTeX)
19133 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19134 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19135 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19136 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19137 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19138 %* \textoplus -> \varoplus (stmaryrd)
19139 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19140 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19141 %* \textominus -> \varominus (stmaryrd)
19142 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19143 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19144 %* \textotimes -> \varotimes (stmaryrd)
19145 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19146 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19147 %* \textoslash -> \varoslash (stmaryrd)
19148 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19149 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19150 %* \textodot -> \varodot (stmaryrd)
19151 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19152 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19153 %* \textcircledcirc -> \ocirc (mathabx)
19154 %* \textcircledcirc -> \varocircle (stmaryrd)
19155 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19156 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19157 %* \textcircledast -> \varoast (stmaryrd)
19158 %* \textcircledast -> \oasterisk (mathabx)

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19159 % U+229D CIRCLED DASH; \circleddash (AmS)
 19160 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
 19161 % U+229E SQUARED PLUS; \boxplus (AmS)
 19162 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
 19163 % U+229F SQUARED MINUS; \boxminus (AmS)
 19164 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
 19165 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
 19166 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
 19167 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
 19168 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
 19169 % U+22A2 RIGHT TACK; \vdash (LaTeX)
 19170 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
 19171 %* \textvdash -> \rightvdash (MnSymbol)
 19172 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
 19173 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
 19174 %* \textdashv -> \leftvdash (MnSymbol)
 19175 % \ndashv (mathabx)
 19176 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
 19177 %* \textndashv -> \nleftvdash (MnSymbol)
 19178 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
 19179 \DeclareTextCommand{\texttop}{PU}{\9042\244}%* U+22A4
 19180 %* \texttop -> \downvdash (MnSymbol)
 19181 % \ndownvdash (MnSymbol)
 19182 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
 19183 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
 19184 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
 19185 %* \textbot -> \upvdash (MnSymbol)
 19186 % \nupvdash (MnSymbol)
 19187 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
 19188 %* \textnupvdash -> \nperp (MnSymbol)
 19189 % U+22A8 TRUE; \vDash (AmS)
 19190 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
 19191 %* \textvDash -> \models (LaTeX)
 19192 %* \textvDash -> \rightmodels (MnSymbol)
 19193 % U+22A9 FORCES; \Vdash (AmS)
 19194 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
 19195 %* \textVdash -> \rightVdash (MnSymbol)
 19196 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
 19197 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
 19198 % \nVdash (mathabx)
 19199 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
 19200 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
 19201 % \VDash (mathabx)
 19202 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
 19203 %* \textVDash -> \rightModels (MnSymbol)
 19204 % U+22AC DOES NOT PROVE; \nvdash (AmS)
 19205 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
 19206 %* \textnvdash -> \nrightvdash (MnSymbol)
 19207 % U+22AD NOT TRUE; \nvDash (AmS)
 19208 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
 19209 %* \textnvDash -> \nrightmodels (MnSymbol)
 19210 %* \textnvDash -> \nmodels (MnSymbol)
 19211 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
 19212 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
 19213 %* \textnVdash -> \nrightVdash (MnSymbol)
 19214 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
 STILE; \nVDash (AmS)

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19215 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19216 %* \textnVDash -> \nrightModels (MnSymbol)
19217 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19218 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19219 %* \textlhd -> \lessclosed (MnSymbol)
19220 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19221 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
19222 %* \textrhd -> \gtrclosed (MnSymbol)
19223 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19224 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19225 %* \textunlhd -> \leqclosed (MnSymbol)
19226 %* \textunlhd -> \trianglelefteq (MnSymbol)
19227 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
texsym, ...)
19228 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19229 %* \textunrhd -> \geqclosed (MnSymbol)
19230 %* \textunrhd -> \trianglerighteq (MnSymbol)
19231 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19232 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19233 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19234 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19235 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19236 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19237 % U+22BB XOR; \veebar (AmS)
19238 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19239 % U+22BC NAND; \barwedge (mathabx)
19240 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19241 % U+22C6 STAR OPERATOR; \star (LaTeX)
19242 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19243 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19244 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19245 % U+22C8 BOWTIE; \bowtie (LaTeX)
19246 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19247 %* \textbowtie -> \Bowtie (wasysym)
19248 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19249 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19250 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19251 % \rtimes (AmS)
19252 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19253 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19254 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19255 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19256 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19257 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19258 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19259 % \nbacksimeq (txfonts/pxfonts)
19260 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19261 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19262 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19263 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19264 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19265 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19266 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19267 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19268 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19269 % \nSubset (txfonts/pxfonts)
19270 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338

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19271 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
 19272 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
 19273 % \nSupset (txfonts/pxfonts)
 19274 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
 19275 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
 19276 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
 19277 %* \textCap -> \doublecap (mathabx)
 19278 % U+22D3 DOUBLE UNION; \Cup (AmS)
 19279 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
 19280 %* \textCup -> \doublecup (mathabx)
 19281 % U+22D4 PITCHFORK; \pitchfork (mathabx)
 19282 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
 19283 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
 19284 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
 19285 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
 19286 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
 19287 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
 19288 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
 19289 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
 19290 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
 19291 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lesseqqualorgreater;
 19292 % \lesseqgtr (AmS)
 19293 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
 19294 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterqualorless;
 19295 % \gtreqless (AmS)
 19296 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
 19297 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
 19298 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
 19299 % \ncurlyeqprec (mathabx)
 19300 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
 19301 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
 19302 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
 19303 % \ncurlyeqsucc (mathabx)
 19304 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
 19305 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
 19306 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
 19307 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
 19308 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
 19309 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
 fonts/pxfonts)
 19310 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
 19311 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
 fonts/pxfonts)
 19312 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
 19313 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
 19314 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
 19315 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
 19316 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
 abx)
 19317 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
 19318 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
 19319 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
 19320 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
 19321 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
 19322 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
 19323 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \preccnsim (AmS)
 19324 \DeclareTextCommand{\textpreccnsim}{PU}{\9042\350}%* U+22E8

19325 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
 19326 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
 19327 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
 19328 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
 19329 %* \textntriangleleft -> \nlessclosed (MnSymbol)
 19330 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriangleright (AmS)
 19331 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
 19332 %* \textntriangleright -> \ngtrclosed (MnSymbol)
 19333 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
 19334 % \ntrianglelefteq (AmS)
 19335 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
 19336 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
 19337 % \ntrianglerighteq (AmS)
 19338 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
 19339 %* \textntrianglerighteq -> \textngeqclosed
 19340 % U+22EE VERTICAL ELLIPSIS; ellipsisvertical; \vdots (LaTeX)
 19341 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
 19342 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
 19343 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
 19344 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
 19345 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
 19346 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 19347 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 19348 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 19349 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

19350 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 19351 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 19352 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
 19353 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
 19354 % U+2311 SQUARE LOZENGE; \wasyllozenge (wasysym)
 19355 \DeclareTextCommand{\textwasyllozenge}{PU}{\9043\021}%* U+2311
 19356 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
 19357 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
 19358 % U+231A WATCH; \clock (wasysym)
 19359 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
 19360 %* \textclock -> \Clocklogo (marvosym)
 19361 %* \textclock -> \ClockLogo (marvosym)
 19362 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
 19363 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
 19364 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
 19365 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
 19366 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
 19367 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
 19368 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
 19369 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
 19370 % U+2322 FROWN; \frown (LaTeX)
 19371 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
 19372 % U+2323 SMILE; \smile (LaTeX)
 19373 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
 19374 % U+2328 KEYBOARD; \Keyboard (marvosym)
 19375 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
 19376 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
 19377 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
 19378 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)

19379 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
 19380 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLin (wasysym)
 19381 \DeclareTextCommand{\textAPLin}{PU}{\9043\071}%* U+2339
 19382 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
 19383 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
 19384 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
 19385 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
 19386 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19387 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19388 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19389 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 19390 % \notbackslash (wasysym)
 19391 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19392 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxbackslash (mathabx)
 19393 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19394 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19395 % \APLleftarrowbox (wasysym)
 19396 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 19397 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19398 % \APLrightarrowbox (wasysym)
 19399 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 19400 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLuparrowbox (wasysym)
 19401 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19402 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19403 % \APLdownarrowbox (wasysym)
 19404 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19405 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19406 % \APLinput (wasysym)
 19407 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19408 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19409 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19410 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19411 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19412 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19413 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19414 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19415 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19416 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19417 % \ForwardToIndex (marvosym)
 19418 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19419 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR;
 19420 % \RewindToIndex (marvosym)
 19421 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19422 % U+2422 BLANK SYMBOL
 19423 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19424 % U+2423 OPEN BOX; blank
 19425 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19426 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)

19427 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19428 %* \textbbslash -> \varparalelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19429 % U+2460 CIRCLED DIGIT ONE; onecircle
 19430 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19431 % U+2461 CIRCLED DIGIT TWO; twocircle
 19432 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19433 % U+2462 CIRCLED DIGIT THREE; threecircle
 19434 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19435 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19436 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19437 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19438 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19439 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19440 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19441 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle
 19442 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19443 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19444 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19445 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19446 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19447 % U+2469 CIRCLED NUMBER TEN; tencircle
 19448 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19449 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19450 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19451 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19452 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19453 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19454 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19455 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 19456 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 19457 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 19458 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 19459 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 19460 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 19461 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 19462 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 19463 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 19464 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 19465 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 19466 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 19467 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 19468 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 19469 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 19470 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 19471 % \CircledA (marvosym)
 19472 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
 19473 %* \textCircledA -> \CleaningA
 19474 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 19475 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 19476 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 19477 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 19478 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 19479 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19480 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19481 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA

19482 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19483 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19484 % \CleaningF (marvosym)
 19485 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19486 % \CleaningFF (marvosym)
 19487 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19488 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 19489 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19490 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19491 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19492 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19493 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19494 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19495 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19496 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19497 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19498 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19499 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19500 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19501 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19502 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19503 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19504 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19505 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19506 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19507 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19508 % \CleaningP (marvosym)
 19509 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19510 % \CleaningPP (marvosym)
 19511 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19512 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19513 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19514 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19515 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19516 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19517 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19518 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19519 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19520 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19521 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19522 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19523 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19524 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19525 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19526 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19527 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19528 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19529 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19530 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19531 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19532 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19533 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19534 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19535 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19536 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19537 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19538 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle

19539 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19540 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19541 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19542 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19543 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19544 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19545 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19546 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19547 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19548 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19549 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19550 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19551 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19552 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19553 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19554 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19555 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19556 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19557 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19558 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19559 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19560 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19561 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19562 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19563 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19564 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19565 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19566 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19567 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19568 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19569 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19570 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19571 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19572 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19573 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19574 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19575 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19576 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19577 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19578 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19579 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19580 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19581 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19582 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19583 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19584 % U+24EA CIRCLED DIGIT ZERO
 19585 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19586 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19587 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19588 %* \textCuttingLine -> \Kutline (marvosym)
 19589 %* \textCuttingLine -> \CutLine (marvosym)
 19590 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

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19591 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
19592 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
19593 %* \textUParrow -> \MoveUp (marvosym)
19594 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
19595 % \bigtriangleup (LaTeX)
19596 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
19597 %* \textbigtriangleup -> \APLup (wasysym)
19598 %* \textbigtriangleup -> \Bleech (marvosym)
19599 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
19600 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
19601 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
19602 % whiterightpointingtriangle; \triangleright (LaTeX)
19603 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
19604 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
19605 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
19606 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
19607 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
19608 %* \textDOWNarrow -> \MoveDown (marvosym)
19609 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
angle;
19610 % \bigtriangledown (LaTeX)
19611 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19612 %* \textbigtriangledown -> \APLdown (wasysym)
19613 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19614 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19615 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
19616 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19617 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19618 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19619 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19620 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19621 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19622 %* \textdiamond -> \Diamond (wasysym)
19623 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19624 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19625 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19626 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19627 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19628 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19629 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19630 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19631 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19632 % \boxbar (stmaryrd)
19633 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19634 % U+25EF LARGE CIRCLE; largecircle
19635 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19636 %* \textbigcircle -> \varbigcirc (stmaryrd)
19637 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19638 % U+2601 CLOUD; \Cloud (ifsym)
19639 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19640 % U+2605 BLACK STAR; \FiveStar (bbding)
19641 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19642 % U+2606 WHITE STAR; \FiveStarOpen (bbding)

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19643 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19644 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bding)
19645 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19646 %* \textPhone -> \Telefon (marvosym)
19647 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19648 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19649 %* \textboxempty -> \Box (wasysym)
19650 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19651 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19652 %* \textCheckedbox -> \CheckedBox (marvosym)
19653 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19654 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19655 %* \textCrossedbox -> \XBox (wasysym)
19656 %* \textCrossedbox -> \CrossedBox (marvosym)
19657 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19658 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19659 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
19660 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19661 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
19662 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19663 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
19664 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
19665 %* \textHandLeft -> \rightpointleft (fourier)
19666 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
19667 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19668 %* \textHandRight -> \leftpointright (fourier)
19669 %* \textHandRight -> \PointingHand (marvosym)
19670 %* \textHandRight -> \Pointinghand (marvosym)
19671 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19672 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19673 %* \textRadioactivity -> \Radiation (ifsym)
19674 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19675 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19676 % U+2625 ANKH; \Ankh (marvosym)
19677 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19678 % U+262F YIN YANG; \YinYang (marvosym)
19679 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19680 %* \textYinYang -> \Yinyang (marvosym)
19681 %* \textYinYang -> \YingYang (marvosym)
19682 %* \textYinYang -> \Yingyang (marvosym)
19683 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19684 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19685 %* \textfrownie -> \Frowny (marvosym)
19686 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19687 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19688 %* \textsmiley -> \Smiley (marvosym)
19689 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19690 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19691 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19692 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19693 %* \textsun -> \Sun (marvosym)
19694 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19695 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19696 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19697 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19698 % U+263F MERCURY; \mercury (wasysym)
19699 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F

19700 %* \textmercury -> \Mercury (marvosym)
 19701 % U+2640 FEMALE SIGN; female; \female (wasysym)
 19702 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
 19703 %* \textPUfemale -> \textfemale (tipx)
 19704 %* \textPUfemale -> \female (wasysym)
 19705 %* \textPUfemale -> \venus (wasysym)
 19706 %* \textPUfemale -> \Venus (marvosym)
 19707 %* \textPUfemale -> \Female (marvosym)
 19708 % U+2641 EARTH; \earth (wasysym)
 19709 \DeclareTextCommand{\textearth}{PU}{\9046\101}% U+2641
 19710 %* \textearth -> \Earth (marvosym)
 19711 % U+2642 MALE SIGN; male, mars; \male (wasysym)
 19712 \DeclareTextCommand{\textmale}{PU}{\9046\102}% U+2642
 19713 %* \textmale -> \mars (wasysym)
 19714 %* \textmale -> \Mars (marvosym)
 19715 %* \textmale -> \Male (marvosym)
 19716 % U+2643 JUPITER; \jupiter (wasysym)
 19717 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}% U+2643
 19718 %* \textjupiter -> \Jupiter (marvosym)
 19719 % U+2644 SATURN; \saturn (wasysym)
 19720 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}% U+2644
 19721 %* \textsaturn -> \Saturn (marvosym)
 19722 % U+2645 URANUS; \uranus (wasysym)
 19723 \DeclareTextCommand{\texturanus}{PU}{\9046\105}% U+2645
 19724 %* \texturanus -> \Uranus (marvosym)
 19725 % U+2646 NEPTUNE; \neptune (wasysym)
 19726 \DeclareTextCommand{\textneptune}{PU}{\9046\106}% U+2646
 19727 %* \textneptune -> \Neptune (marvosym)
 19728 % U+2647 PLUTO; \pluto (wasysym)
 19729 \DeclareTextCommand{\textpluto}{PU}{\9046\107}% U+2647
 19730 %* \textpluto -> \Pluto (marvosym)
 19731 % U+2648 ARIES; \aries (wasysym)
 19732 \DeclareTextCommand{\textaries}{PU}{\9046\110}% U+2648
 19733 %* \textaries -> \Aries (marvosym)
 19734 % U+2649 TAURUS; \taurus (wasysym)
 19735 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}% U+2649
 19736 %* \texttaurus -> \Taurus (marvosym)
 19737 % U+264A GEMINI; \gemini (wasysym)
 19738 \DeclareTextCommand{\textgemini}{PU}{\9046\112}% U+264A
 19739 %* \textgemini -> \Gemini (marvosym)
 19740 % U+264B CANCER; \cancer (wasysym)
 19741 \DeclareTextCommand{\textcancer}{PU}{\9046\113}% U+264B
 19742 %* \textcancer -> \Cancer (marvosym)
 19743 % U+264C LEO; \leo (wasysym)
 19744 \DeclareTextCommand{\textleo}{PU}{\9046\114}% U+264C
 19745 %* \textleo -> \Leo (marvosym)
 19746 % U+264D VIRGO; \virgo (wasysym)
 19747 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}% U+264D
 19748 %* \textvirgo -> \Virgo (marvosym)
 19749 % U+264E LIBRA; \libra (wasysym)
 19750 \DeclareTextCommand{\textlibra}{PU}{\9046\116}% U+264E
 19751 %* \textlibra -> \Libra (marvosym)
 19752 % U+264F SCORPIO; \scorpio (wasysym)
 19753 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}% U+264F
 19754 %* \textscorpio -> \Scorpio (marvosym)
 19755 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
 19756 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}% U+2650

19757 %* \textsagittarius -> \Sagittarius (marvosym)
19758 % U+2651 CAPRICORN; \capricornus (wasysym)
19759 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19760 %* \textcapricornus -> \Capricorn (marvosym)
19761 % U+2652 AQUARIUS; \aquarius (wasysym)
19762 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19763 %* \textaquarius -> \Aquarius (marvosym)
19764 % U+2653 PISCES; \pisces (wasysym)
19765 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19766 %* \textpisces -> \Pisces (marvosym)
19767 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19768 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19769 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19770 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19771 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19772 %* \textheartsuitwhite -> \Heart (marvosym)
19773 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19774 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19775 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19776 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19777 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19778 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19779 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19780 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19781 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19782 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19783 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19784 % U+2666 BLACK DIAMOND SUIT; diamond
19785 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19786 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19787 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19788 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19789 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19790 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19791 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19792 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19793 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19794 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19795 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
note (arev)
19796 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19797 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19798 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19799 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19800 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19801 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19802 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19803 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19804 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19805 %* \textrecycle -> \Recycling (marvosym)
19806 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19807 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19808 % U+2691 BLACK FLAG; \Flag (ifsym)
19809 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19810 %* \textFlag -> \VarFlag (ifsym)
19811 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19812 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692

19813 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
 19814 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
 19815 %* \textdsmilitary -> \textxswup (fourier)
 19816 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
 19817 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
 19818 % U+2696 SCALES; \dsjuridical (dictsym)
 19819 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
 19820 % U+2697 ALEMBIC; \dschemical (dictsym)
 19821 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19822 % U+2698 FLOWER; \dsbiological (dictsym)
 19823 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19824 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19825 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19826 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19827 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19828 % U+26A0 WARNING SIGN; \danger (fourier)
 19829 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19830 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19831 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19832 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19833 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19834 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19835 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19836 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19837 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19838 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19839 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19840 % U+26AD MARRIAGE SYMBOL
 19841 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19842 % U+26AE DIVORCE SYMBOL
 19843 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19844 % U+26B2 NEUTER; \textunconfemale (tipx)
 19845 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}% U+26B2
 19846 %* \textPUunconfemale -> \textunconfemale (tipx)
 19847 % U+26B9 SEXTILE; \hexstar (wasysym)
 19848 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19849 % U+26BD SOCCER BALL; \Football (marvosym)
 19850 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19851 %* \textSoccerBall -> \Football (marvosym)
 19852 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19853 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19854 % U+26C6 RAIN; \Rain (ifsym)
 19855 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19856 % U+26D4 NO ENTRY; \noway (fourier)
 19857 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19858 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19859 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19860 % U+26FA TENT; \Tent (ifsym)
 19861 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19862 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
 19863 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19864 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19865 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19866 % U+2702 BLACK SCISSORS; \ScissorRight (bding)

19867 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19868 %* \textScissorRight -> \RightScissors (marvosym)
 19869 %* \textScissorRight -> \Leftscissors (marvosym)
 19870 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
 19871 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19872 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 19873 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19874 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 19875 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19876 % U+2707 TAPE DRIVE; \Tape (bding)
 19877 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19878 % U+2708 AIRPLANE; \Plane (bding)
 19879 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19880 % U+2709 ENVELOPE; \Envelope (bding),
 19881 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19882 %* \textEnvelope -> \Letter (marvosym)
 19883 % U+270C VICTORY HAND; \Peace (bding)
 19884 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19885 % U+270D WRITING HAND; \WritingHand (marvosym)
 19886 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19887 %* \textWritingHand -> \Writinghand (marvosym)
 19888 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19889 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19890 % U+270F PENCIL; \PencilRight (bding)
 19891 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19892 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19893 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19894 % U+2711 WHITE NIB; \NibRight (bding)
 19895 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19896 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19897 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19898 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19899 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19900 %* \textCheckmark -> \checkmark (MnSymbol)
 19901 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19902 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19903 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19904 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19905 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19906 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19907 % U+2717 BALLOT X; \XSolidBrush (bding)
 19908 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19909 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19910 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19911 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19912 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19913 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19914 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19915 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19916 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19917 % U+271D LATIN CROSS; \Cross (bding)
 19918 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19919 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19920 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19921 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19922 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19923 % U+2720 MALTESE CROSS; \CrossMaltese (bding)

19924 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
19925 % U+2721 STAR OF DAVID; \DavidStar (bding)
19926 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
19927 %* \textDavidStar -> \davidstar (wasysym)
19928 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
19929 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
19930 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
19931 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
19932 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
19933 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
19934 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
19935 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
19936 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
19937 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
19938 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
19939 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
19940 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
19941 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
19942 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
19943 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
19944 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
19945 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
19946 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
19947 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
19948 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
19949 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
19950 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
19951 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
19952 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
19953 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
19954 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
19955 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
19956 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
19957 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
19958 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
19959 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
19960 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
19961 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
19962 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
19963 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
19964 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
19965 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
19966 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
19967 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
19968 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
19969 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
19970 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
19971 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
19972 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
19973 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
19974 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
19975 % \SixFlowerOpenCenter (bding)
19976 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C

19977 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19978 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19979 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAl-
 ternate (bding)
 19980 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19981 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19982 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19983 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19984 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19985 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlow-
 erPetal (bding)
 19986 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19987 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \Sunshi-
 neOpenCircled (bding)
 19988 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19989 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlow-
 erAltPetal (bding)
 19990 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19991 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19992 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19993 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19994 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19995 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19996 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19997 % U+2747 SPARKLE; \Sparkle (bding)
 19998 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19999 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 20000 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 20001 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 20002 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 20003 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20004 % \EightFlowerPetalRemoved (bding)
 20005 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 20006 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20007 % \EightAsterisk (bding)
 20008 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20009 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20010 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20011 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20012 % \SquareShadowBottomRight (bding)
 20013 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20014 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20015 % \SquareShadowTopRight (bding)
 20016 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 20017 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20018 % \SquareCastShadowBottomRight (bding)
 20019 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20020 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20021 % \SquareCastShadowTopRight (bding)
 20022 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20023 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (b-
 ding)
 20024 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20025 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20026 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20027 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20028 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759

20029 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bbding)
 20030 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

20031 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20032 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20033 % \notperp (mathabx)
 20034 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20035 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20036 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20037 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20038 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20039 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20040 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20041 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20042 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20043 %* \textlbrackdbl -> \llbracket (stmaryrd)
 20044 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20045 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20046 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20047 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20048 % \circlearrowleft (AmS)
 20049 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20050 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20051 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20052 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20053 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20054 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20055 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 20056 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 20057 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 20058 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 20059 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20060 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 20061 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20062 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 20063 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 20064 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20065 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20066 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmapsfrom (stmaryrd)
 20067 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20068 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmapsto (stmaryrd)
 20069 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20070 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSymbol)
 20071 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20072 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSymbol)
 20073 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20074 % U+2923 NORTH WEST ARROW WITH HOOK; \hooknwarrow (MnSymbol)
 20075 \DeclareTextCommand{\texthooknwarrow}{PU}{\9051\043}%* U+2923

20076 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 20077 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 20078 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 20079 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20080 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 20081 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20082 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 20083 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 20084 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 20085 % \rcurvearrowne (MnSymbol)
 20086 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 20087 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 20088 % \lcurvearrowse (MnSymbol)
 20089 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 20090 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 20091 % \lcurvearrowsw (MnSymbol)
 20092 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 20093 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 20094 % \rcurvearrowse (MnSymbol)
 20095 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 20096 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 20097 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 20098 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 20099 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 20100 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 20101 % \rcurvearrowdown (MnSymbol)
 20102 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939
 20103 %* \textrcurvearrowdown -> \LeftTorque (marvosym)
 20104 %* \textrcurvearrowdown -> \Lefttorque (marvosym)
 20105 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
 bol)
 20106 \DeclareTextCommand{\textrcurvearrowleft}{PU}{\9051\072}%* U+293A
 20107 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 20108 % \rcurvearrowright (MnSymbol)
 20109 \DeclareTextCommand{\textrcurvearrowright}{PU}{\9051\073}%* U+293B
 20110 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
 poon (mathabx)
 20111 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 20112 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
 poon (mathabx)
 20113 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 20114 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 20115 % \updownharpoonrightleft (MnSymbol)
 20116 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 20117 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 20118 % \updownharpoonleftright (MnSymbol)
 20119 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 20120 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 20121 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 20122 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 20123 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 20124 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 20125 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963

20126 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 20127 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 20128 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 20129 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20130 % WITH BARB RIGHT; \downdownarpoons (mathabx)
 20131 \DeclareTextCommand{\textdowndownarpoons}{PU}{\9051\145}%* U+2965
 20132 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20133 % \leftbarharpoon (mathabx)
 20134 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20135 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20136 % LONG DASH; \barleftharpoon (mathabx)
 20137 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20138 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20139 % LONG DASH; \rightbarharpoon (mathabx)
 20140 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20141 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20142 % LONG DASH; \barrightharpoon (mathabx)
 20143 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20144 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20145 % WITH BARB RIGHT; \updownarpoons (mathabx)
 20146 \DeclareTextCommand{\textupdownarpoons}{PU}{\9051\156}%* U+296E
 20147 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 20148 % WITH BARB RIGHT; \downuparpoons (mathabx)
 20149 \DeclareTextCommand{\textdownuparpoons}{PU}{\9051\157}%* U+296F
 20150 % U+297F DOWN FISH TAIL
 20151 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20152 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparentthesis (stmaryrd)
 20153 \DeclareTextCommand{\textlparentthesis}{PU}{\9051\207}%* U+2987
 20154 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rparentthesis (stmaryrd)
 20155 \DeclareTextCommand{\textrparentthesis}{PU}{\9051\210}%* U+2988
 20156 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 20157 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 20158 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 20159 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 20160 %* \textobar -> \textvarobar (stmaryrd)
 20161 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 20162 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 20163 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 20164 %* \textobslash -> \obackslash (mathabx)
 20165 %* \textobslash -> \varobslash (stmaryrd)
 20166 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 20167 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 20168 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 20169 %* \textobot -> \odplus (ulsy)
 20170 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 20171 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 20172 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 20173 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 20174 %* \textolessthan -> \varolessthan (stmaryrd)
 20175 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)

20176 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 20177 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 20178 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 20179 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 20180 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 20181 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 20182 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 20183 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 20184 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 20185 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 20186 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 20187 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 20188 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 20189 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 20190 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 20191 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 20192 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 20193 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20194 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 20195 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 20196 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 20197 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 20198 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 20199 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 20200 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 20201 % pxfonts, wasysym)
 20202 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 20203 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 20204 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 20205 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 20206 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 20207 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 20208 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 20209 %* \textminusdot -> \divdot (mathabx)
 20210 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 20211 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 20212 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 20213 % \dtimes (mathdesign)
 20214 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 20215 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20216 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20217 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20218 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20219 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20220 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20221 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20222 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20223 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20224 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20225 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20226 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20227 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20228 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20229 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20230 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56

20231 %* \textdoublevee -> \merge (stmaryrd)
 20232 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20233 % \doublebarwedge (AmS)
 20234 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20235 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20236 % \veedoublebar (mahtabx)
 20237 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
 20238 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20239 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20240 % \neqdot (MnSymbol)
 20241 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20242 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20243 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20244 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20245 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20246 % \nleqslant (txfonts/pxfonts)
 20247 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20248 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20249 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 20250 % \ngeqslant (txfonts/pxfonts)
 20251 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20252 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20253 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20254 % \nlessapprox (txfonts/pxfonts)
 20255 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20256 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20257 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20258 % \ngtrapprox (txfonts/pxfonts)
 20259 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20260 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20261 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 20262 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20263 % \gneq (AmS)
 20264 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20265 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20266 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20267 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20268 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20269 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 20270 % \lesseqgtr (AmS)
 20271 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
 20272 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 20273 % \gtreqless (AmS)
 20274 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
 20275 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20276 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20277 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20278 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20279 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20280 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20281 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20282 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20283 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 20284 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF

20285 % \npreceq (txfonts/pxfonts)
 20286 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20287 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 Symbol)
 20288 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20289 % \nsucceq (txfonts/pxfonts)
 20290 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 20291 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 20292 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20293 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 20294 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20295 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20296 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20297 % \npreceqq (txfonts/pxfonts)
 20298 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20299 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20300 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20301 % \nsucceqq (txfonts/pxfonts)
 20302 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20303 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20304 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20305 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20306 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20307 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20308 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20309 % \nprecapprox (txfonts/pxfonts)
 20310 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20311 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20312 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20313 % \nsuccapprox (txfonts/pxfonts)
 20314 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20315 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
 prox (AmS)
 20316 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20317 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
 prox (AmS)
 20318 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20319 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20320 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20321 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20322 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20323 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20324 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20325 % \nsupseteqq (mathabx)
 20326 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20327 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20328 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20329 %* \textdashV -> \leftVdash (MnSymbol)
 20330 % \ndashV (mathabx)
 20331 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20332 %* \textndashV -> \nleftVdash (MnSymbol)
 20333 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20334 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20335 %* \textDashv -> \leftmodels (MnSymbol)
 20336 % \nDashv (mathabx)

20337 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20338 %* \textnDashv -> \nleftmodels (MnSymbol)
 20339 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20340 % \DashV (mathabx)
 20341 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20342 %* \textDashV -> \leftModels (MnSymbol)
 20343 % \nDashV (mathabx)
 20344 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20345 %* \textnDashV -> \nleftModels (MnSymbol)
 20346 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20347 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20348 % \ndownmodels (MnSymbol)
 20349 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20350 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20351 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20352 % \nupmodels (MnSymbol)
 20353 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20354 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20355 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20356 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20357 % \interleave (stmaryrd)
 20358 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20359 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 20360 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 20361 %* \textsslash -> \varparallel (txfonts\pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20362 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20363 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20364 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20365 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20366 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20367 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20368 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20369 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20370 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20371 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20372 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20373 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20374 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20375 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20376 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20377 % \textdownstep (tipa)
 20378 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20379 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20380 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20381 %* \textPUheng -> \textheng (tipx)
 20382 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 20383 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C

20384 %* \textPUlhookfour -> \textlhookfour (tipx)
 20385 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20386 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20387 %* \textPUscf -> \textscf (tipx)
 20388 % U+A735 LATIN SMALL LETTER AO; \textao lig (tipx)
 20389 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20390 %* \textPUaolig -> \textao lig (tipx)
 20391 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20392 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20393 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20394 \DeclareTextCommand{\textcircumlowlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20395 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20396 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20397 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20398 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20399 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20400 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20401 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20402 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20403 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20404 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20405 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20406 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20407 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20408 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20409 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20410 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20411 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20412 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20413 %* \textfullnote -> \Ganz (harmony)
 20414 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20415 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20416 %* \texthalfnote -> \Halb (harmony)
 20417 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20418 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20419 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20420 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20421 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20422 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20423 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20424 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20425 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20426 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20427 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20428 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20429 % U+1F468 MAN; \ManFace (marvosym)
 20430 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20431 % U+1F469 WOMAN; \WomanFace (marvosym)
 20432 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20433 %* \textWomanFace -> \Womanface (marvosym)
 20434 % U+1F4E0 FAX MACHINE; \Fax (marvosym)

```

20435 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
20436 %* \textFax -> \Faxmachine (marvosym)
20437 % U+1F525 FIRE; \Fire (ifsym)
20438 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

```

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

```

20439 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
20440 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
20441 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
20442 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
20443 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
20444 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

```

51.2.45 Miscellaneous

```

20445 \DeclareTextCommand{\SS}{PU}{SS}%
20446 % \textcopyleft (textcomp)
20447 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
20448 % \ccnc (ccllicenses)
20449 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
20450 % \ccnd (ccllicenses)
20451 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
20452 % \ccsa (ccllicenses)
20453 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20454 % \Info (marvosym, china2e)
20455 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20456 % \CESign (marvosym)
20457 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20458 %* \textCESign -> \CESign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20459 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20460 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20461 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20462 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20463 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20464 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20465 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20466 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

20467 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20468 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20469 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20470 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20471 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20472 </puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20473 (*puvnenc)
20474 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20475 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20476 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20477 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4

```

20478 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
 20479 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
 20480 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
 20481 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
 20482 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
 20483 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
 20484 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
 20485 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF

 20486 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
 20487 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 20488 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
 20489 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
 20490 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
 20491 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
 20492 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
 20493 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
 20494 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
 20495 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
 20496 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
 20497 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 20498 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20499 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20500 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20501 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20502 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20503 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20504 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20505 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20506 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20507 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20508 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20509 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20510 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20511 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20512 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20513 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20514 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20515 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20516 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20517 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20518 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20519 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20520 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20521 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20522 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20523 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20524 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20525 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20526 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20527 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20528 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20529 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20530 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20531 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20532 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20533 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20534 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7

20535 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20536 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20537 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20538 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20539 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20540 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20541 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20542 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20543 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20544 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20545 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20546 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20547 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20548 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20549 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20550 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20551 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20552 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20553 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20554 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20555 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20556 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20557 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20558 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20559 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20560 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20561 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20562 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20563 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20564 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20565 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20566 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20567 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20568 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20569 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20570 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20571 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20572 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20573 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 20574 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20575 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20576 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20577 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20578 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 20579 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20580 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20581 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20582 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20583 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20584 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20585 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20586 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20587 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20588 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 20589 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20590 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20591 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA

```

20592 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
20593 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
20594 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
20595 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
20596 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
20597 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
20598 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA
20599 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20600 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20601 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20602 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20603 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
20604 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20605 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20606 </p>

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20607 < *puarenc >

20608 % U+0621;afii57409;ARABIC LETTER HAMZA
20609 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20610 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20611 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20612 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20613 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20614 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20615 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20616 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20617 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20618 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20619 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20620 % U+0627;afii57415;ARABIC LETTER ALEF
20621 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20622 % U+0628;afii57416;ARABIC LETTER BEH
20623 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20624 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20625 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20626 % U+062A;afii57418;ARABIC LETTER TEH
20627 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20628 % U+062B;afii57419;ARABIC LETTER THEH
20629 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20630 % U+062C;afii57420;ARABIC LETTER JEEM
20631 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20632 % U+062D;afii57421;ARABIC LETTER HAH
20633 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20634 % U+062E;afii57422;ARABIC LETTER KHAH
20635 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20636 % U+062F;afii57423;ARABIC LETTER DAL
20637 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20638 % U+0630;afii57424;ARABIC LETTER THAL
20639 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
20640 % U+0631;afii57425;ARABIC LETTER REH
20641 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
20642 % U+0632;afii57426;ARABIC LETTER ZAIN
20643 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632

```

20644 % U+0633;afii57427;ARABIC LETTER SEEN
 20645 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20646 % U+0634;afii57428;ARABIC LETTER SHEEN
 20647 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20648 % U+0635;afii57429;ARABIC LETTER SAD
 20649 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20650 % U+0636;afii57430;ARABIC LETTER DAD
 20651 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20652 % U+0637;afii57431;ARABIC LETTER TAH
 20653 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20654 % U+0638;afii57432;ARABIC LETTER ZAH
 20655 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20656 % U+0639;afii57433;ARABIC LETTER AIN
 20657 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20658 % U+063A;afii57434;ARABIC LETTER GHAIN
 20659 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20660 % U+0640;afii57440;ARABIC TATWEEL
 20661 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20662 % U+0641;afii57441;ARABIC LETTER FEH
 20663 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20664 % U+0642;afii57442;ARABIC LETTER QAF
 20665 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20666 % U+0643;afii57443;ARABIC LETTER KAF
 20667 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20668 % U+0644;afii57444;ARABIC LETTER LAM
 20669 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20670 % U+0645;afii57445;ARABIC LETTER MEEM
 20671 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20672 % U+0646;afii57446;ARABIC LETTER NOON
 20673 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20674 % U+0647;afii57470;ARABIC LETTER HEH
 20675 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20676 % U+0648;afii57448;ARABIC LETTER WAW
 20677 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20678 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20679 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20680 % U+064A;afii57450;ARABIC LETTER YEHA
 20681 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20682 % U+064B;afii57451;ARABIC FATHATAN
 20683 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20684 % U+064C;afii57452;ARABIC DAMMATAN
 20685 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20686 % U+064D;afii57453;ARABIC KASRATAN
 20687 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20688 % U+064E;afii57454;ARABIC FATHA
 20689 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20690 % U+064F;afii57455;ARABIC DAMMA
 20691 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20692 % U+0650;afii57456;ARABIC KASRA
 20693 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20694 % U+0651;afii57457;ARABIC SHADDA
 20695 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20696 % U+0652;afii57458;ARABIC SUKUN
 20697 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20698 % U+067E ARABIC LETTER PEH; afii57506

20699 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20700 % U+0686 ARABIC LETTER TCHEH; afii57507
 20701 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20702 % U+0698 ARABIC LETTER JEH; afii57508
 20703 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20704 % U+06A9 ARABIC LETTER KEHEH
 20705 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20706 % U+06AF ARABIC LETTER GAF; afii57509
 20707 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20708 % U+06CC ARABIC LETTER FARSI YEH
 20709 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20710 % U+200C ZERO WIDTH NON-JOINER; afii61664
 20711 \DeclareTextCommand{\ZWJ}{PU}{\9040\014}% U+200C
 20712 % U+200D ZERO WIDTH JOINER; afii301
 20713 \DeclareTextCommand{\textEncodingNoboundary}{PU}{\9040\015}% U+200D

 20714 (/puarenc)

 20715 (*psdextra)
 20716 \Hy@VersionCheck{psdextra.def}
 20717 \newcommand*{\psdmapshortnames}{%
 20718 \let\MVPlus\textMVPlus
 20719 \let\MVComma\textMVComma
 20720 \let\MVMinus\textMVMinus
 20721 \let\MVPeriod\textMVPeriod
 20722 \let\MVDivision\textMVDivision
 20723 \let\MVZero\textMVZero
 20724 \let\MVOne\textMVOne
 20725 \let\MVTwo\textMVTwo
 20726 \let\MVThree\textMVThree
 20727 \let\MVFour\textMVFour
 20728 \let\MVFive\textMVFive
 20729 \let\MVSix\textMVSix
 20730 \let\MVSeven\textMVSeven
 20731 \let\MVEight\textMVEight
 20732 \let\MVNine\textMVNine
 20733 \let\MVAt\textMVAt
 20734 \let\copyright\textcopyright
 20735 \let\twosuperior\texttwosuperior
 20736 \let\threesuperior\textthreesuperior
 20737 \let\onesuperior\textonesuperior
 20738 \let\Thorn\textThorn
 20739 \let\thorn\textthorn
 20740 \let\hbar\texthbar
 20741 \let\hausaB\texthausaB
 20742 \let\hausaD\texthausaD
 20743 \let\hausaK\texthausaK
 20744 \let\barl\textbarl
 20745 \let\inve\textinve
 20746 \let\slashc\textslashc
 20747 \let\scripta\textscripta
 20748 \let\openo\textopeno
 20749 \let\rtaild\textrtaild
 20750 \let\reve\textreve
 20751 \let\schwa\textschwa
 20752 \let\niepsilon\textniepsilon
 20753 \let\repsilon\textrepsilon
 20754 \let\rhookrepsilon\texthookrepsilon

20755 \let\scriptg\textscriptg
 20756 \let\scg\textscg
 20757 \let\ipagamma\textipagamma
 20758 \let\babygamma\textbabygamma
 20759 \let\bari\textbari
 20760 \let\niiota\textniiota
 20761 \let\sci\textsci
 20762 \let\scn\textscn
 20763 \let\niphi\textniphi
 20764 \let\longlegr\textlonglegr
 20765 \let\scr\textscr
 20766 \let\invscr\textinvscr
 20767 \let\esh\textesh
 20768 \let\baru\textbaru
 20769 \let\niupsilon\textniupsilon
 20770 \let\scriptv\textscriptv
 20771 \let\turnv\textturnv
 20772 \let\turnw\textturnw
 20773 \let\turny\textturny
 20774 \let\scy\textscy
 20775 \let\yogh\textyogh
 20776 \let\glotstop\textglotstop
 20777 \let\revglotstop\textrevglotstop
 20778 \let\invglotstop\textinvglotstop
 20779 \let\Gamma\textGamma
 20780 \let\Delta\textDelta
 20781 \let\Theta\textTheta
 20782 \let\Lambda\textLambda
 20783 \let\Xi\textXi
 20784 \let\Pi\textPi
 20785 \let\Sigma\textSigma
 20786 \let\Upsilon\textUpsilon
 20787 \let\Phi\textPhi
 20788 \let\Psi\textPsi
 20789 \let\Omega\textOmega
 20790 \let\alpha\textalpha
 20791 \let\beta\textbeta
 20792 \let\gamma\textgamma
 20793 \let\delta\textdelta
 20794 \let\epsilon\textepsilon
 20795 \let\zeta\textzeta
 20796 \let\eta\texteta
 20797 \let\theta\texttheta
 20798 \let\iota\textiota
 20799 \let\kappa\textkappa
 20800 \let\lambda\textlambda
 20801 \let\mu\textmu
 20802 \let\mugreek\textmugreek
 20803 \let\nu\textnu
 20804 \let\xi\textxi
 20805 \let\pi\textpi
 20806 \let\rho\textrho
 20807 \let\varsigma\textvarsigma
 20808 \let\sigma\textsigma
 20809 \let\tau\texttau
 20810 \let\upsilon\textupsilon
 20811 \let\phi\textphi

20812 `\let\chi\textchi`
 20813 `\let\psi\textpsi`
 20814 `\let\omega\textomega`
 20815 `\let\scd\textscd`
 20816 `\let\scu\textscu`
 20817 `\let\iinferior\textiinferior`
 20818 `\let\rinferior\textrinferior`
 20819 `\let\uinferior\textuinferior`
 20820 `\let\vinferior\textvinferior`
 20821 `\let\betainferior\textbetainferior`
 20822 `\let\gammainferior\textgammainferior`
 20823 `\let\rhoinferior\textrhoinferior`
 20824 `\let\phiinferior\textphiinferior`
 20825 `\let\chiinferior\textchiinferior`
 20826 `\let\barsci\textbarsci`
 20827 `\let\barp\textbarp`
 20828 `\let\barscu\textbarscu`
 20829 `\let\htrtaild\texthtrtaild`
 20830 `\let\dagger\textdagger`
 20831 `\let\bullet\textbullet`
 20832 `\let\hdotfor\texthdotfor`
 20833 `\let\prime\textprime`
 20834 `\let\second\textsecond`
 20835 `\let\third\textthird`
 20836 `\let\backprime\textbackprime`
 20837 `\let\lefttherefore\textlefttherefore`
 20838 `\let\fourth\textfourth`
 20839 `\let\diamonddots\textdiamonddots`
 20840 `\let\zerosuperior\textzerosuperior`
 20841 `\let\isuperior\textisuperior`
 20842 `\let\foursuperior\textfoursuperior`
 20843 `\let\fivesuperior\textfivesuperior`
 20844 `\let\sixsuperior\textsixsuperior`
 20845 `\let\sevensuperior\textsevensuperior`
 20846 `\let\eightsuperior\texteightsuperior`
 20847 `\let\ninesuperior\textninesuperior`
 20848 `\let\plussuperior\textplussuperior`
 20849 `\let\minussuperior\textminussuperior`
 20850 `\let>equalsuperior\textequalsuperior`
 20851 `\let\parenleftsuperior\textparenleftsuperior`
 20852 `\let\parenrightsuperior\textparenrightsuperior`
 20853 `\let\nsuperior\textnsuperior`
 20854 `\let\zeroinferior\textzeroinferior`
 20855 `\let\oneinferior\textoneinferior`
 20856 `\let\twoinferior\texttwoinferior`
 20857 `\let\threeinferior\textthreeinferior`
 20858 `\let\fourinferior\textfourinferior`
 20859 `\let\fiveinferior\textfiveinferior`
 20860 `\let\sixinferior\textsixinferior`
 20861 `\let\seveninferior\textseveninferior`
 20862 `\let\eightinferior\texteightinferior`
 20863 `\let\nineinferior\textnineinferior`
 20864 `\let\plusinferior\textplusinferior`
 20865 `\let\minusinferior\textminusinferior`
 20866 `\let>equalsinferior\textequalsinferior`
 20867 `\let\parenleftinferior\textparenleftinferior`
 20868 `\let\parenrightinferior\textparenrightinferior`

20869 \let\ainferior\textainferior
 20870 \let\einferior\texteinferior
 20871 \let\oinferior\textoinferior
 20872 \let\xinferior\textxinferior
 20873 \let\schwainferior\textschwainferior
 20874 \let\hinferior\texthinferior
 20875 \let\kinferior\textkinferior
 20876 \let\linferior\textlinferior
 20877 \let\minferior\textminferior
 20878 \let\ninferior\textninferior
 20879 \let\pinferior\textpinferior
 20880 \let\sinferior\textsinferior
 20881 \let\tinferior\texttinferior
 20882 \let\Deleatur\textDeleatur
 20883 \let\hslash\texthslash
 20884 \let\Im\textIm
 20885 \let\ell\textell
 20886 \let\wp\textwp
 20887 \let\Re\textRe
 20888 \let\mho\textmho
 20889 \let\riota\textriota
 20890 \let\Finv\textFinv
 20891 \let\aleph\textaleph
 20892 \let\beth\textbeth
 20893 \let\gimel\textgimel
 20894 \let\daleth\textdaleth
 20895 \let\xfax\textfax
 20896 \let\Game\textGame
 20897 \let\leftarrow\textleftarrow
 20898 \let\uparrow\textuparrow
 20899 \let\rightarrow\textrightarrow
 20900 \let\downarrow\textdownarrow
 20901 \let\leftrightarrow\textleftrightarrow
 20902 \let\updownarrow\textupdownarrow
 20903 \let\nwarrow\textnwarrow
 20904 \let\nearrow\textnearrow
 20905 \let\searrow\textsearrow
 20906 \let\swarrow\textswarrow
 20907 \let\nleftarrow\textnleftarrow
 20908 \let\nrightarrow\textnrightarrow
 20909 \let\twoheadleftarrow\texttwoheadleftarrow
 20910 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20911 \let\twoheaduparrow\texttwoheaduparrow
 20912 \let\twoheadrightarrow\texttwoheadrightarrow
 20913 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20914 \let\twoheaddownarrow\texttwoheaddownarrow
 20915 \let\leftarrowtail\textleftarrowtail
 20916 \let\rightarrowtail\textrightarrowtail
 20917 \let\mapsto\textmapsto
 20918 \let\hookleftarrow\texthookleftarrow
 20919 \let\hookrightarrow\texthookrightarrow
 20920 \let\looparrowleft\textlooparrowleft
 20921 \let\looparrowright\textlooparrowright
 20922 \let\leftrightharrow\textleftrightharrow
 20923 \let\lightning\textlightning
 20924 \let\dlsh\textdlsh
 20925 \let\curvearrowleft\textcurvearrowleft

20926 $\let\curvearrowright\textcurvearrowright$
 20927 $\let\leftharpoonup\textleftharpoonup$
 20928 $\let\leftharpoondown\textleftharpoondown$
 20929 $\let\upharpoonright\textupharpoonright$
 20930 $\let\upharpoonleft\textupharpoonleft$
 20931 $\let\rightharpoonup\texttrightharpoonup$
 20932 $\let\rightharpoondown\texttrightharpoondown$
 20933 $\let\downharpoonright\textdownharpoonright$
 20934 $\let\downharpoonleft\textdownharpoonleft$
 20935 $\let\rightleftarrows\textrightleftarrows$
 20936 $\let\updownarrows\textupdownarrows$
 20937 $\let\leftrightarrows\textleftrightarrows$
 20938 $\let\leftleftarrows\textleftleftarrows$
 20939 $\let\upuparrows\textupuparrows$
 20940 $\let\righttrightarrows\textrighttrightarrows$
 20941 $\let\downownarrows\textdownownarrows$
 20942 $\let\leftrightharpoons\textleftrightharpoons$
 20943 $\let\rightleftharpoons\textrightleftharpoons$
 20944 $\let\nLeftarrow\textnLeftarrow$
 20945 $\let\nLeftrightarrow\textnLeftrightarrow$
 20946 $\let\nRrightarrow\textnRrightarrow$
 20947 $\let\Leftarrow\textLeftarrow$
 20948 $\let\Uparrow\textUparrow$
 20949 $\let\Rrightarrow\textRrightarrow$
 20950 $\let\Downarrow\textDownarrow$
 20951 $\let\Leftrightarrow\textLeftrightarrow$
 20952 $\let\Updownarrow\textUpdownarrow$
 20953 $\let\Narrow\textNarrow$
 20954 $\let\Nearrow\textNearrow$
 20955 $\let\Searrow\textSearrow$
 20956 $\let\Swarrow\textSwarrow$
 20957 $\let\Lleftarrow\textLleftarrow$
 20958 $\let\Rrightarrow\textRrightarrow$
 20959 $\let\leftsquigarrow\textleftsquigarrow$
 20960 $\let\rightsquigarrow\textrightsquigarrow$
 20961 $\let\dashleftarrow\textdashleftarrow$
 20962 $\let\dasheduparrow\textdasheduparrow$
 20963 $\let\dashrightarrow\textdashrightarrow$
 20964 $\let\dasheddownarrow\textdasheddownarrow$
 20965 $\let\pointer\textpointer$
 20966 $\let\downuparrows\textdownuparrows$
 20967 $\let\leftarrowtriangle\textleftarrowtriangle$
 20968 $\let\rightarrowtriangle\textrightarrowtriangle$
 20969 $\let\leftrightarrowtriangle\textleftrightarrowtriangle$
 20970 $\let\forall\textforall$
 20971 $\let\complement\textcomplement$
 20972 $\let\partial\textpartial$
 20973 $\let\exists\textexists$
 20974 $\let\nexists\textnexists$
 20975 $\let\emptyset\textemptyset$
 20976 $\let\triangle\texttriangle$
 20977 $\let\nabla\textnabla$
 20978 $\let\in\textin$
 20979 $\let\notin\textnotin$
 20980 $\let\smallin\textsmallin$
 20981 $\let\ni\textni$
 20982 $\let\notowner\textnotowner$

20983 $\backslash\text{smallowns}\text{textsmallowns}$
 20984 $\backslash\text{prod}\text{textprod}$
 20985 $\backslash\text{amalg}\text{textamalg}$
 20986 $\backslash\text{sum}\text{textsum}$
 20987 $\backslash\text{mp}\text{textmp}$
 20988 $\backslash\text{dotplus}\text{textdotplus}$
 20989 $\backslash\text{Divides}\text{textDivides}$
 20990 $\backslash\text{DividesNot}\text{textDividesNot}$
 20991 $\backslash\text{setminus}\text{textsetminus}$
 20992 $\backslash\text{ast}\text{textast}$
 20993 $\backslash\text{circ}\text{textcirc}$
 20994 $\backslash\text{surd}\text{textsurd}$
 20995 $\backslash\text{propto}\text{textpropto}$
 20996 $\backslash\text{infty}\text{textinfty}$
 20997 $\backslash\text{angle}\text{textangle}$
 20998 $\backslash\text{measuredangle}\text{textmeasuredangle}$
 20999 $\backslash\text{sphericalangle}\text{textsphericalangle}$
 21000 $\backslash\text{mid}\text{textmid}$
 21001 $\backslash\text{nmid}\text{textnmid}$
 21002 $\backslash\text{parallel}\text{textparallel}$
 21003 $\backslash\text{nparallel}\text{textnparallel}$
 21004 $\backslash\text{wedge}\text{textwedge}$
 21005 $\backslash\text{owedge}\text{textowedge}$
 21006 $\backslash\text{vee}\text{textvee}$
 21007 $\backslash\text{ovee}\text{textovee}$
 21008 $\backslash\text{cap}\text{textcap}$
 21009 $\backslash\text{cup}\text{textcup}$
 21010 $\backslash\text{int}\text{textint}$
 21011 $\backslash\text{iint}\text{textiint}$
 21012 $\backslash\text{iiint}\text{textiiint}$
 21013 $\backslash\text{ooint}\text{textoint}$
 21014 $\backslash\text{oiint}\text{textoiint}$
 21015 $\backslash\text{oointclockwise}\text{textointclockwise}$
 21016 $\backslash\text{oointctrclockwise}\text{textointctrclockwise}$
 21017 $\backslash\text{therefore}\text{texttherefore}$
 21018 $\backslash\text{because}\text{textbecause}$
 21019 $\backslash\text{vdots}\text{textvdots}$
 21020 $\backslash\text{sqdots}\text{textsquaredots}$
 21021 $\backslash\text{dotminus}\text{textdotminus}$
 21022 $\backslash\text{eqcolon}\text{texteqcolon}$
 21023 $\backslash\text{sim}\text{textsim}$
 21024 $\backslash\text{backsim}\text{textbacksim}$
 21025 $\backslash\text{nbacksim}\text{textnbacksim}$
 21026 $\backslash\text{wr}\text{textwr}$
 21027 $\backslash\text{nsim}\text{textnsim}$
 21028 $\backslash\text{eqsim}\text{texteqsim}$
 21029 $\backslash\text{neqsim}\text{textneqsim}$
 21030 $\backslash\text{simeq}\text{textsimeq}$
 21031 $\backslash\text{nsimeq}\text{textnsimeq}$
 21032 $\backslash\text{cong}\text{textcong}$
 21033 $\backslash\text{ncong}\text{textncong}$
 21034 $\backslash\text{approx}\text{textapprox}$
 21035 $\backslash\text{napprox}\text{textnapprox}$
 21036 $\backslash\text{approxeq}\text{textapproxeq}$
 21037 $\backslash\text{napproxeq}\text{textnapproxeq}$
 21038 $\backslash\text{triplesim}\text{texttriplesim}$
 21039 $\backslash\text{ntriplesim}\text{textntriplesim}$

21040 \let\backcong\textbackcong
 21041 \let\backcong\textbackcong
 21042 \let\asymp\textasymp
 21043 \let\asymp\textasymp
 21044 \let\Bumpeq\textBumpeq
 21045 \let\Bumpeq\textBumpeq
 21046 \let\bumpeq\textbumpeq
 21047 \let\bumpeq\textbumpeq
 21048 \let\doteq\textdoteq
 21049 \let\doteq\textdoteq
 21050 \let\doteqdot\textdoteqdot
 21051 \let\doteqdot\textdoteqdot
 21052 \let\fallingdoteq\textfallingdoteq
 21053 \let\fallingdoteq\textfallingdoteq
 21054 \let\risingdoteq\textrisingdoteq
 21055 \let\risingdoteq\textrisingdoteq
 21056 \let\colonequals\textcolonequals
 21057 \let\colonequals\textcolonequals
 21058 \let\eqcirc\texteqcirc
 21059 \let\neqcirc\textneqcirc
 21060 \let\circeq\textcirceq
 21061 \let\circeq\textcirceq
 21062 \let\hateq\texthateq
 21063 \let\hateq\texthateq
 21064 \let\triangleeq\texttriangleeq
 21065 \let\neq\textneq
 21066 \let\neq\textneq
 21067 \let\equiv\textequiv
 21068 \let\equiv\textequiv
 21069 \let\leq\textleq
 21070 \let\leq\textleq
 21071 \let\geq\textgeq
 21072 \let\geq\textgeq
 21073 \let\leqq\textleqq
 21074 \let\leqq\textleqq
 21075 \let\geqq\textgeqq
 21076 \let\geqq\textgeqq
 21077 \let\lneqq\textlneqq
 21078 \let\lneqq\textlneqq
 21079 \let\ll\textll
 21080 \let\ll\textll
 21081 \let\gg\textgg
 21082 \let\gg\textgg
 21083 \let\between\textbetween
 21084 \let\less\textless
 21085 \let\less\textless
 21086 \let\leq\textleq
 21087 \let\leq\textleq
 21088 \let\lesssim\textlesssim
 21089 \let\lesssim\textlesssim
 21090 \let\lesssim\textlesssim
 21091 \let\lessgtr\textlessgtr
 21092 \let\lessgtr\textlessgtr
 21093 \let\gtrless\textgtrless
 21094 \let\gtrless\textgtrless
 21095 \let\lessgtr\textlessgtr
 21096 \let\prec\textprec

21097 \let\succ\textsucc
 21098 \let\preccurlyeq\textpreccurlyeq
 21099 \let\succcurlyeq\textsucccurlyeq
 21100 \let\precsim\textprecsim
 21101 \let\nprecsim\textnprecsim
 21102 \let\succsim\textsuccsim
 21103 \let\nsuccsim\textnsuccsim
 21104 \let\nprec\textnprec
 21105 \let\nsucc\textnsucc
 21106 \let\subset\textsubset
 21107 \let\supset\textsupset
 21108 \let\nsubset\textnsubset
 21109 \let\nsupset\textnsupset
 21110 \let\subseteq\textsubseteq
 21111 \let\supseteq\textsupseteq
 21112 \let\nsubseteq\textnsubseteq
 21113 \let\nsupseteq\textnsupseteq
 21114 \let\subsetneq\textsubsetneq
 21115 \let\supsetneq\textsupsetneq
 21116 \let\cupdot\textcupdot
 21117 \let\cupplus\textcupplus
 21118 \let\sqsubset\textsqssubset
 21119 \let\nsqsubset\textnsqsubset
 21120 \let\sqsupset\textsqsupset
 21121 \let\nsqsupset\textnsqsupset
 21122 \let\sqsubseteq\textsqssubseteq
 21123 \let\nsqsubseteq\textnsqsubseteq
 21124 \let\sqsupseteq\textsqsupseteq
 21125 \let\nsqsupseteq\textnsqsupseteq
 21126 \let\sqcap\textsqqcap
 21127 \let\sqqcup\textsqqcup
 21128 \let\oplus\textoplus
 21129 \let\ominus\textominus
 21130 \let\otimes\textotimes
 21131 \let\oslash\textoslash
 21132 \let\odot\textodot
 21133 \let\circledcirc\textcircledcirc
 21134 \let\circledast\textcircledast
 21135 \let\circleddash\textcircleddash
 21136 \let\boxplus\textboxplus
 21137 \let\boxminus\textboxminus
 21138 \let\boxtimes\textboxtimes
 21139 \let\boxdot\textboxdot
 21140 \let\vdash\textvdash
 21141 \let\dashv\textdashv
 21142 \let\ndashv\textndashv
 21143 \let\top\texttop
 21144 \let\ndownvdash\textndownvdash
 21145 \let\bot\textbot
 21146 \let\nupvdash\textnupvdash
 21147 \let\vDash\textvDash
 21148 \let\Vdash\textVdash
 21149 \let\Vvdash\textVvdash
 21150 \let\nVdash\textnVdash
 21151 \let\VDash\textVDash
 21152 \let\nvdash\textnvdash
 21153 \let\nvDash\textnvDash

21154 $\backslash\mathrm{Vdash}\text{Vdash}$
 21155 $\backslash\mathrm{VDash}\text{VDash}$
 21156 $\backslash\mathrm{lhs}\text{lhs}$
 21157 $\backslash\mathrm{rhs}\text{rhs}$
 21158 $\backslash\mathrm{unlhs}\text{unlhs}$
 21159 $\backslash\mathrm{unrhs}\text{unrhs}$
 21160 $\backslash\mathrm{multimapdotbothA}\text{multimapdotbothA}$
 21161 $\backslash\mathrm{multimapdotbothB}\text{multimapdotbothB}$
 21162 $\backslash\mathrm{multimap}\text{multimap}$
 21163 $\backslash\mathrm{veebar}\text{veebar}$
 21164 $\backslash\mathrm{barwedge}\text{barwedge}$
 21165 $\backslash\mathrm{star}\text{star}$
 21166 $\backslash\mathrm{divideontimes}\text{divideontimes}$
 21167 $\backslash\mathrm{bowtie}\text{bowtie}$
 21168 $\backslash\mathrm{ltimes}\text{ltimes}$
 21169 $\backslash\mathrm{rtimes}\text{rtimes}$
 21170 $\backslash\mathrm{leftthreetimes}\text{leftthreetimes}$
 21171 $\backslash\mathrm{rightthreetimes}\text{rightthreetimes}$
 21172 $\backslash\mathrm{backsimeq}\text{backsimeq}$
 21173 $\backslash\mathrm{nbacksimeq}\text{nbacksimeq}$
 21174 $\backslash\mathrm{curlyvee}\text{curlyvee}$
 21175 $\backslash\mathrm{curlywedge}\text{curlywedge}$
 21176 $\backslash\mathrm{Subset}\text{Subset}$
 21177 $\backslash\mathrm{nSubset}\text{nSubset}$
 21178 $\backslash\mathrm{Supset}\text{Supset}$
 21179 $\backslash\mathrm{nSupset}\text{nSupset}$
 21180 $\backslash\mathrm{Cap}\text{Cap}$
 21181 $\backslash\mathrm{Cup}\text{Cup}$
 21182 $\backslash\mathrm{pitchfork}\text{pitchfork}$
 21183 $\backslash\mathrm{lessdot}\text{lessdot}$
 21184 $\backslash\mathrm{gtrdot}\text{gtrdot}$
 21185 $\backslash\mathrm{lll}\text{lll}$
 21186 $\backslash\mathrm{ggg}\text{ggg}$
 21187 $\backslash\mathrm{lesseqgtr}\text{lesseqgtr}$
 21188 $\backslash\mathrm{gtreqless}\text{gtreqless}$
 21189 $\backslash\mathrm{curlyeqprec}\text{curlyeqprec}$
 21190 $\backslash\mathrm{ncurlyeqprec}\text{ncurlyeqprec}$
 21191 $\backslash\mathrm{curlyeqsucc}\text{curlyeqsucc}$
 21192 $\backslash\mathrm{ncurlyeqsucc}\text{ncurlyeqsucc}$
 21193 $\backslash\mathrm{npreccurlyeq}\text{npreccurlyeq}$
 21194 $\backslash\mathrm{nsucccurlyeq}\text{nsucccurlyeq}$
 21195 $\backslash\mathrm{nqsubseteq}\text{nqsubseteq}$
 21196 $\backslash\mathrm{nqsupseteq}\text{nqsupseteq}$
 21197 $\backslash\mathrm{sqsubsetneq}\text{sqsubsetneq}$
 21198 $\backslash\mathrm{sqsupsetneq}\text{sqsupsetneq}$
 21199 $\backslash\mathrm{lnsim}\text{lnsim}$
 21200 $\backslash\mathrm{gnsim}\text{gnsim}$
 21201 $\backslash\mathrm{precnsim}\text{precnsim}$
 21202 $\backslash\mathrm{succnsim}\text{succnsim}$
 21203 $\backslash\mathrm{ntriangleleft}\text{ntriangleleft}$
 21204 $\backslash\mathrm{ntriangleright}\text{ntriangleright}$
 21205 $\backslash\mathrm{ntrianglelefteq}\text{ntrianglelefteq}$
 21206 $\backslash\mathrm{ntrianglerighteq}\text{ntrianglerighteq}$
 21207 $\backslash\mathrm{vdots}\text{vdots}$
 21208 $\backslash\mathrm{cdots}\text{cdots}$
 21209 $\backslash\mathrm{udots}\text{udots}$
 21210 $\backslash\mathrm{ddots}\text{ddots}$

21211 \let\barin\textbarin
 21212 \let\diameter\textdiameter
 21213 \let\backneg\textbackneg
 21214 \let\wasylozenge\textwasylozenge
 21215 \let\invbackneg\textinvbackneg
 21216 \let\clock\textclock
 21217 \let\ulcorner\textulcorner
 21218 \let\urcorner\texturcorner
 21219 \let\llcorner\textllcorner
 21220 \let\lrcorner\textlrcorner
 21221 \let\frown\textfrown
 21222 \let\smile\textsmile
 21223 \let\Keyboard\textKeyboard
 21224 \let\langle\textlangle
 21225 \let\rangle\textrangle
 21226 \let\APLinv\textAPLinv
 21227 \let\Tumbler\textTumbler
 21228 \let\notslash\textnotslash
 21229 \let\notbackslash\textnotbackslash
 21230 \let\boxbackslash\textboxbackslash
 21231 \let\APLleftarrowbox\textAPLleftarrowbox
 21232 \let\APLrightarrowbox\textAPLrightarrowbox
 21233 \let\APLuparrowbox\textAPLuparrowbox
 21234 \let\APLdownarrowbox\textAPLdownarrowbox
 21235 \let\APLinput\textAPLinput
 21236 \let\Request\textRequest
 21237 \let\Beam\textBeam
 21238 \let\hexagon\texthexagon
 21239 \let\APLbox\textAPLbox
 21240 \let\ForwardToIndex\textForwardToIndex
 21241 \let\RewindToIndex\textRewindToIndex
 21242 \let\bbslash\textbbslash
 21243 \let\CircledA\textCircledA
 21244 \let\CleaningF\textCleaningF
 21245 \let\CleaningFF\textCleaningFF
 21246 \let\CleaningP\textCleaningP
 21247 \let\CleaningPP\textCleaningPP
 21248 \let\CuttingLine\textCuttingLine
 21249 \let\UParrow\textUParrow
 21250 \let\bigtriangleup\textbigtriangleup
 21251 \let\Forward\textForward
 21252 \let\triangleright\texttriangleright
 21253 \let\RHD\textRHD
 21254 \let\DOWNarrow\textDOWNarrow
 21255 \let\bigtriangledown\textbigtriangledown
 21256 \let\Rewind\textRewind
 21257 \let\triangleleft\texttriangleleft
 21258 \let\LHD\textLHD
 21259 \let\diamond\textdiamond
 21260 \let\lozenge\textlozenge
 21261 \let\LEFTCIRCLE\textLEFTCIRCLE
 21262 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21263 \let\openbullet\textopenbullet
 21264 \let\boxbar\textboxbar
 21265 \let\bigcircle\textbigcircle
 21266 \let\Cloud\textCloud
 21267 \let\FiveStar\textFiveStar

21268 \let\FiveStarOpen\textFiveStarOpen
 21269 \let\Phone\textPhone
 21270 \let\boxempty\textboxempty
 21271 \let\Checkedbox\textCheckedbox
 21272 \let\Crossedbox\textCrossedbox
 21273 \let\Coffeecup\textCoffeecup
 21274 \let\HandCuffLeft\textHandCuffLeft
 21275 \let\HandCuffRight\textHandCuffRight
 21276 \let\HandLeft\textHandLeft
 21277 \let\HandRight\textHandRight
 21278 \let\Radioactivity\textRadioactivity
 21279 \let\Biohazard\textBiohazard
 21280 \let\Ankh\textAnkh
 21281 \let\YinYang\textYinYang
 21282 \let\frownie\textfrownie
 21283 \let\smiley\textsmiley
 21284 \let\blacksmiley\textblacksmiley
 21285 \let\sun\textsun
 21286 \let\leftmoon\textleftmoon
 21287 \let\rightmoon\textrightmoon
 21288 \let\mercury\textmercury
 21289 \let\earth\textearth
 21290 \let\male\textmale
 21291 \let\jupiter\textjupiter
 21292 \let\saturn\textsaturn
 21293 \let\uranus\texturanus
 21294 \let\neptune\textneptune
 21295 \let\pluto\textpluto
 21296 \let\aries\textaries
 21297 \let\taurus\texttaurus
 21298 \let\gemini\textgemini
 21299 \let\cancer\textcancer
 21300 \let\leo\textleo
 21301 \let\virgo\textvirgo
 21302 \let\libra\textlibra
 21303 \let\scorpio\textscorpio
 21304 \let\sagittarius\textsagittarius
 21305 \let\capricornus\textcapricornus
 21306 \let\aquarius\textaquarius
 21307 \let\pisces\textpisces
 21308 \let\quarternote\textquarternote
 21309 \let\twonotes\texttwonotes
 21310 \let\sixteenthnote\textsixteenthnote
 21311 \let\flat\textflat
 21312 \let\natural\textnatural
 21313 \let\sharp\textsharp
 21314 \let\recycle\textrecycle
 21315 \let\Wheelchair\textWheelchair
 21316 \let\Flag\textFlag
 21317 \let\MineSign\textMineSign
 21318 \let\ds\textds
 21319 \let\dsmedical\textdsmedical
 21320 \let\dsjuridical\textdsjuridical
 21321 \let\dschemical\textdschemical
 21322 \let\dsbiological\textdsbiological
 21323 \let\dscommercial\textdscommercial
 21324 \let\manstar\textmanstar

21325 \let\danger\textdanger
 21326 \let\FemaleFemale\textFemaleFemale
 21327 \let\MaleMale\textMaleMale
 21328 \let\FemaleMale\textFemaleMale
 21329 \let\Hermaphrodite\textHermaphrodite
 21330 \let\Neutral\textNeutral
 21331 \let\hexstar\texthexstar
 21332 \let\SunClod\textSunClod
 21333 \let\Rain\textRain
 21334 \let\noway\textnoway
 21335 \let\Mountain\textMountain
 21336 \let\Tent\textTent
 21337 \let\ScissorRight\textScissorRight
 21338 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21339 \let\ScissorHollowRight\textScissorHollowRight
 21340 \let\PhoneHandset\textPhoneHandset
 21341 \let\Tape\textTape
 21342 \let\Plane\textPlane
 21343 \let\Envelope\textEnvelope
 21344 \let\Peace\textPeace
 21345 \let\WritingHand\textWritingHand
 21346 \let\PencilRightDown\textPencilRightDown
 21347 \let\PencilRight\textPencilRight
 21348 \let\PencilRightUp\textPencilRightUp
 21349 \let\NibRight\textNibRight
 21350 \let\NibSolidRight\textNibSolidRight
 21351 \let\Checkmark\textCheckmark
 21352 \let\CheckmarkBold\textCheckmarkBold
 21353 \let\XSolid\textXSolid
 21354 \let\XSolidBold\textXSolidBold
 21355 \let\XSolidBrush\textXSolidBrush
 21356 \let\PlusOutline\textPlusOutline
 21357 \let\Plus\textPlus
 21358 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21359 \let\PlusCenterOpen\textPlusCenterOpen
 21360 \let\Cross\textCross
 21361 \let\CrossOpenShadow\textCrossOpenShadow
 21362 \let\CrossOutline\textCrossOutline
 21363 \let\CrossMaltese\textCrossMaltese
 21364 \let\DavidStar\textDavidStar
 21365 \let\FourAsterisk\textFourAsterisk
 21366 \let\JackStar\textJackStar
 21367 \let\JackStarBold\textJackStarBold
 21368 \let\ClowerTips\textClowerTips
 21369 \let\FourStar\textFourStar
 21370 \let\FourStarOpen\textFourStarOpen
 21371 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21372 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21373 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21374 \let\FiveStarOutline\textFiveStarOutline
 21375 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21376 \let\FiveStarConvex\textFiveStarConvex
 21377 \let\FiveStarShadow\textFiveStarShadow
 21378 \let\AsteriskBold\textAsteriskBold
 21379 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21380 \let\EightStarTaper\textEightStarTaper
 21381 \let\EightStarConvex\textEightStarConvex

21382 \let\SixStar\textSixStar
 21383 \let\EightStar\textEightStar
 21384 \let\EightStarBold\textEightStarBold
 21385 \let\TwelveStar\textTwelveStar
 21386 \let\SixteenStarLight\textSixteenStarLight
 21387 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21388 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21389 \let\Asterisk\textAsterisk
 21390 \let\SixFlowerAlternate\textSixFlowerAlternate
 21391 \let\FiveFlowerPetal\textFiveFlowerPetal
 21392 \let\FiveFlowerOpen\textFiveFlowerOpen
 21393 \let\EightFlowerPetal\textEightFlowerPetal
 21394 \let\SunshineOpenCircled\textSunshineOpenCircled
 21395 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21396 \let\SnowflakeChevron\textSnowflakeChevron
 21397 \let\Snowflake\textSnowflake
 21398 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21399 \let\Sparkle\textSparkle
 21400 \let\SparkleBold\textSparkleBold
 21401 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21402 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21403 \let\EightAsterisk\textEightAsterisk
 21404 \let\CircleShadow\textCircleShadow
 21405 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21406 \let\SquareTopRight\textSquareTopRight
 21407 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21408 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21409 \let\DiamondSolid\textDiamondSolid
 21410 \let\RectangleThin\textRectangleThin
 21411 \let\Rectangle\textRectangle
 21412 \let\RectangleBold\textRectangleBold
 21413 \let\perp\textperp
 21414 \let\notperp\textnotperp
 21415 \let\veedot\textveedot
 21416 \let\wedgedot\textwedgedot
 21417 \let\leftspoon\textleftspoon
 21418 \let\lbrackdbl\textlbrackdbl
 21419 \let\rbrackdbl\textrbrackdbl
 21420 \let\circlearrowleft\textcirclearrowleft
 21421 \let\circlearrowright\textcirclearrowright
 21422 \let\longleftarrow\textlongleftarrow
 21423 \let\longrightarrow\textlongrightarrow
 21424 \let\longlefttrightarrow\textlonglefttrightarrow
 21425 \let\Longleftarrow\textLongleftarrow
 21426 \let\Longrightarrow\textLongrightarrow
 21427 \let\Longlefttrightarrow\textLonglefttrightarrow
 21428 \let\longmapsto\textlongmapsto
 21429 \let\Longmapsfrom\textLongmapsfrom
 21430 \let\Longmapsto\textLongmapsto
 21431 \let\nwsearrow\textnwsearrow
 21432 \let\neswarrow\textneswarrow
 21433 \let\hookrightarrow\texthookrightarrow
 21434 \let\rhookrightarrow\text\rhookrightarrow
 21435 \let\hooksearrow\texthooksearrow
 21436 \let\rhooksearrow\text\rhooksearrow
 21437 \let\leadsto\textleadsto
 21438 \let\rcurvearrowne\textrcurvearrowne

21439 $\backslash\mathrm{let}\backslash\mathrm{lcurvearrowse}\backslash\mathrm{text}\mathrm{lcurvearrowse}$
 21440 $\backslash\mathrm{let}\backslash\mathrm{lcurvearrowsw}\backslash\mathrm{text}\mathrm{lcurvearrowsw}$
 21441 $\backslash\mathrm{let}\backslash\mathrm{rcurvearrowse}\backslash\mathrm{text}\mathrm{rcurvearrowse}$
 21442 $\backslash\mathrm{let}\backslash\mathrm{lcurvearrowdown}\backslash\mathrm{text}\mathrm{lcurvearrowdown}$
 21443 $\backslash\mathrm{let}\backslash\mathrm{rcurvearrowdown}\backslash\mathrm{text}\mathrm{rcurvearrowdown}$
 21444 $\backslash\mathrm{let}\backslash\mathrm{rcurvearrowleft}\backslash\mathrm{text}\mathrm{rcurvearrowleft}$
 21445 $\backslash\mathrm{let}\backslash\mathrm{rcurvearrowright}\backslash\mathrm{text}\mathrm{rcurvearrowright}$
 21446 $\backslash\mathrm{let}\backslash\mathrm{leftrightharpoon}\backslash\mathrm{text}\mathrm{leftrightharpoon}$
 21447 $\backslash\mathrm{let}\backslash\mathrm{rightleftharpoon}\backslash\mathrm{text}\mathrm{rightleftharpoon}$
 21448 $\backslash\mathrm{let}\backslash\mathrm{updownharpoonrightleft}\backslash\mathrm{text}\mathrm{updownharpoonrightleft}$
 21449 $\backslash\mathrm{let}\backslash\mathrm{updownharpoonleftright}\backslash\mathrm{text}\mathrm{updownharpoonleftright}$
 21450 $\backslash\mathrm{let}\backslash\mathrm{leftleftharpoons}\backslash\mathrm{text}\mathrm{leftleftharpoons}$
 21451 $\backslash\mathrm{let}\backslash\mathrm{upupharpoons}\backslash\mathrm{text}\mathrm{upupharpoons}$
 21452 $\backslash\mathrm{let}\backslash\mathrm{rightrightarpoons}\backslash\mathrm{text}\mathrm{rightrightarpoons}$
 21453 $\backslash\mathrm{let}\backslash\mathrm{downdownharpoons}\backslash\mathrm{text}\mathrm{downdownharpoons}$
 21454 $\backslash\mathrm{let}\backslash\mathrm{leftbarharpoon}\backslash\mathrm{text}\mathrm{leftbarharpoon}$
 21455 $\backslash\mathrm{let}\backslash\mathrm{barleftharpoon}\backslash\mathrm{text}\mathrm{barleftharpoon}$
 21456 $\backslash\mathrm{let}\backslash\mathrm{rightbarharpoon}\backslash\mathrm{text}\mathrm{rightbarharpoon}$
 21457 $\backslash\mathrm{let}\backslash\mathrm{barrightharpoon}\backslash\mathrm{text}\mathrm{barrightharpoon}$
 21458 $\backslash\mathrm{let}\backslash\mathrm{updownharpoons}\backslash\mathrm{text}\mathrm{updownharpoons}$
 21459 $\backslash\mathrm{let}\backslash\mathrm{downupharpoons}\backslash\mathrm{text}\mathrm{downupharpoons}$
 21460 $\backslash\mathrm{let}\backslash\mathrm{moo}\backslash\mathrm{text}\mathrm{moo}$
 21461 $\backslash\mathrm{let}\backslash\mathrm{llparenthesis}\backslash\mathrm{text}\mathrm{llparenthesis}$
 21462 $\backslash\mathrm{let}\backslash\mathrm{rrparenthesis}\backslash\mathrm{text}\mathrm{rrparenthesis}$
 21463 $\backslash\mathrm{let}\backslash\mathrm{invdiameter}\backslash\mathrm{text}\mathrm{invdiameter}$
 21464 $\backslash\mathrm{let}\backslash\mathrm{obar}\backslash\mathrm{text}\mathrm{obar}$
 21465 $\backslash\mathrm{let}\backslash\mathrm{obslash}\backslash\mathrm{text}\mathrm{obslash}$
 21466 $\backslash\mathrm{let}\backslash\mathrm{obot}\backslash\mathrm{text}\mathrm{obot}$
 21467 $\backslash\mathrm{let}\backslash\mathrm{NoChemicalCleaning}\backslash\mathrm{text}\mathrm{NoChemicalCleaning}$
 21468 $\backslash\mathrm{let}\backslash\mathrm{olessthan}\backslash\mathrm{text}\mathrm{olessthan}$
 21469 $\backslash\mathrm{let}\backslash\mathrm{ogreaterthan}\backslash\mathrm{text}\mathrm{ogreaterthan}$
 21470 $\backslash\mathrm{let}\backslash\mathrm{boxslash}\backslash\mathrm{text}\mathrm{boxslash}$
 21471 $\backslash\mathrm{let}\backslash\mathrm{boxbslash}\backslash\mathrm{text}\mathrm{boxbslash}$
 21472 $\backslash\mathrm{let}\backslash\mathrm{boxast}\backslash\mathrm{text}\mathrm{boxast}$
 21473 $\backslash\mathrm{let}\backslash\mathrm{boxcircle}\backslash\mathrm{text}\mathrm{boxcircle}$
 21474 $\backslash\mathrm{let}\backslash\mathrm{boxbox}\backslash\mathrm{text}\mathrm{boxbox}$
 21475 $\backslash\mathrm{let}\backslash\mathrm{Valve}\backslash\mathrm{text}\mathrm{Valve}$
 21476 $\backslash\mathrm{let}\backslash\mathrm{multimapboth}\backslash\mathrm{text}\mathrm{multimapboth}$
 21477 $\backslash\mathrm{let}\backslash\mathrm{shuffle}\backslash\mathrm{text}\mathrm{shuffle}$
 21478 $\backslash\mathrm{let}\backslash\mathrm{uplus}\backslash\mathrm{text}\mathrm{uplus}$
 21479 $\backslash\mathrm{let}\backslash\mathrm{bigdoublewedge}\backslash\mathrm{text}\mathrm{bigdoublewedge}$
 21480 $\backslash\mathrm{let}\backslash\mathrm{bigdoublevee}\backslash\mathrm{text}\mathrm{bigdoublevee}$
 21481 $\backslash\mathrm{let}\backslash\mathrm{Join}\backslash\mathrm{text}\mathrm{Join}$
 21482 $\backslash\mathrm{let}\backslash\mathrm{fatsemi}\backslash\mathrm{text}\mathrm{fatsemi}$
 21483 $\backslash\mathrm{let}\backslash\mathrm{circplus}\backslash\mathrm{text}\mathrm{circplus}$
 21484 $\backslash\mathrm{let}\backslash\mathrm{minusdot}\backslash\mathrm{text}\mathrm{minusdot}$
 21485 $\backslash\mathrm{let}\backslash\mathrm{dotimes}\backslash\mathrm{text}\mathrm{dotimes}$
 21486 $\backslash\mathrm{let}\backslash\mathrm{dtimes}\backslash\mathrm{text}\mathrm{dtimes}$
 21487 $\backslash\mathrm{let}\backslash\mathrm{odiv}\backslash\mathrm{text}\mathrm{odiv}$
 21488 $\backslash\mathrm{let}\backslash\mathrm{invneg}\backslash\mathrm{text}\mathrm{invneg}$
 21489 $\backslash\mathrm{let}\backslash\mathrm{sqdoublecap}\backslash\mathrm{text}\mathrm{sqdoublecap}$
 21490 $\backslash\mathrm{let}\backslash\mathrm{capdot}\backslash\mathrm{text}\mathrm{capdot}$
 21491 $\backslash\mathrm{let}\backslash\mathrm{sqdoublecup}\backslash\mathrm{text}\mathrm{sqdoublecup}$
 21492 $\backslash\mathrm{let}\backslash\mathrm{doublewedge}\backslash\mathrm{text}\mathrm{doublewedge}$
 21493 $\backslash\mathrm{let}\backslash\mathrm{doublevee}\backslash\mathrm{text}\mathrm{doublevee}$
 21494 $\backslash\mathrm{let}\backslash\mathrm{doublebarwedge}\backslash\mathrm{text}\mathrm{doublebarwedge}$
 21495 $\backslash\mathrm{let}\backslash\mathrm{veedoublebar}\backslash\mathrm{text}\mathrm{veedoublebar}$

21496 `\let\eqdot\texteqdot`
 21497 `\let\neqdot\textneqdot`
 21498 `\let\coloncolonequals\textcoloncolonequals`
 21499 `\let\leqslant\textleqslant`
 21500 `\let\neqslant\textneqslant`
 21501 `\let\geqslant\textgeqslant`
 21502 `\let\ngeqslant\textngeqslant`
 21503 `\let\lessapprox\textlessapprox`
 21504 `\let\nlessapprox\textnlessapprox`
 21505 `\let\gtrapprox\textgtrapprox`
 21506 `\let\ngtrapprox\textngtrapprox`
 21507 `\let\lneq\textlneq`
 21508 `\let\gneq\textgneq`
 21509 `\let\lnapprox\textlnapprox`
 21510 `\let\gnapprox\textgnapprox`
 21511 `\let\lesseqqgtr\textlesseqqgtr`
 21512 `\let\gtreqqless\textgtreqqless`
 21513 `\let\eqslantless\texteqslantless`
 21514 `\let\eqslantgtr\texteqslantgtr`
 21515 `\let\leftslice\textleftslice`
 21516 `\let\rightslice\textright slice`
 21517 `\let\preceq\textpreceq`
 21518 `\let\preceq\textpreceq`
 21519 `\let\succeq\textsucceq`
 21520 `\let\nsucceq\textnsucceq`
 21521 `\let\precneq\textprecneq`
 21522 `\let\succneq\textsuccneq`
 21523 `\let\preceqq\textpreceqq`
 21524 `\let\preceqq\textpreceqq`
 21525 `\let\succeqq\textsucceqq`
 21526 `\let\succeqq\textsucceqq`
 21527 `\let\precneqq\textprecneqq`
 21528 `\let\succneqq\textsuccneqq`
 21529 `\let\precapprox\textprecapprox`
 21530 `\let\precapprox\textprecapprox`
 21531 `\let\succapprox\textsuccapprox`
 21532 `\let\succapprox\textsuccapprox`
 21533 `\let\precnapprox\textprecnapprox`
 21534 `\let\succnapprox\textsuccnapprox`
 21535 `\let\subseteqq\textsubseteqq`
 21536 `\let\subseteqq\textsubseteqq`
 21537 `\let\supseteqq\textsupseteqq`
 21538 `\let\supseteqq\textsupseteqq`
 21539 `\let\dashV\textdashV`
 21540 `\let\ndashV\textndashV`
 21541 `\let\Dashv\textDashv`
 21542 `\let\ndashv\textndashv`
 21543 `\let\DashV\textDashV`
 21544 `\let\ndashV\textndashV`
 21545 `\let\downmodels\textdownmodels`
 21546 `\let\downmodels\textdownmodels`
 21547 `\let\upmodels\textupmodels`
 21548 `\let\upmodels\textupmodels`
 21549 `\let\upspoon\textupspoon`
 21550 `\let\interleave\textinterleave`
 21551 `\let\slash\textslash`
 21552 `\let\pentagon\textpentagon`

21553 \let\varhexagon\textvarhexagon
21554 \let\jinferior\textjinferior
21555 \let\slashdiv\textslashdiv
21556 \let\fivedots\textfivedots
21557 \let\oo\textoo
21558 \let\GaPa\textGaPa
21559 \let\HaPa\textHaPa
21560 \let\ViPa\textViPa
21561 \let\AcPa\textAcPa
21562 \let\SePa\textSePa
21563 \let\ZwPa\textZwPa
21564 \let\fullnote\textfullnote
21565 \let\halfnote\texthalfnote
21566 \let\Vier\textVier
21567 \let\Acht\textAcht
21568 \let\Sech\textSech
21569 \let\Zwdr\textZwdr
21570 \let\Mundus\textMundus
21571 \let\Moon\textMoon
21572 \let\ManFace\textManFace
21573 \let\WomanFace\textWomanFace
21574 \let\Fax\textFax
21575 \let\Fire\textFire
21576 \let\Bicycle\textBicycle
21577 \let\Gentsroom\textGentsroom
21578 \let\Ladiesroom\textLadiesroom
21579 \let\ccnc\textccnc
21580 \let\ccsa\textccsa
21581 \let\Info\textInfo
21582 \let\CESign\textCESign
21583 \let\neg\textneg
21584 \let\times\texttimes
21585 \let\div\textdiv
21586 \let\pm\textpm
21587 \let\cdot\textcdot
21588 }% \psdmapshortnames
21589 \newcommand*{\psdaliasnames}{%
21590 \let\epsdice\HyPsd@DieFace
21591 \let\fcdice\HyPsd@DieFace
21592 \let\MoonPha\HyPsd@MoonPha
21593 \let\mathdollar\textdollar
21594 \let\EyesDollar\textdollar
21595 \let\binampersand\textampersand
21596 \let\with\textampersand
21597 \let\mathunderscore\textunderscore
21598 \let\textvertline\textbar
21599 \let\mathsterling\textsterling
21600 \let\pounds\textsterling
21601 \let\brokenvert\textbrokenbar
21602 \let\mathsection\textsection
21603 \let\S\textsection
21604 \let\mathparagraph\textparagraph
21605 \let\MultiplicationDot\textperiodcentered
21606 \let\Squaredot\textperiodcentered
21607 \let\vartimes\textmultiply
21608 \let\MVMultiplication\textmultiply
21609 \let\eth\dh

21610 \let\crossd\textcrd
 21611 \let\textbard\textcrd
 21612 \let\bard\textcrd
 21613 \let\textcrh\texthbar
 21614 \let\crossh\texthbar
 21615 \let\planck\texthbar
 21616 \let\eng\ng
 21617 \let\engma\ng
 21618 \let\crossb\textcrb
 21619 \let\textbarb\textcrb
 21620 \let\barb\textcrb
 21621 \let\Florin\textflorin
 21622 \let\hv\texthvl
 21623 \let\hausak\texthtk
 21624 \let\crossnilambda\textcrlambda
 21625 \let\barlambda\textcrlambda
 21626 \let\lambdabar\textcrlambda
 21627 \let\lambdaslash\textcrlambda
 21628 \let\textnrleg\textPUnrleg
 21629 \let\textpipevar\textpipe
 21630 \let\textdoublepipevar\textdoublepipe
 21631 \let\textdoublebarpipevar\textdoublebarpipe
 21632 \let\textcrg\textgslash
 21633 \let\textdblig\textPUdblig
 21634 \let\textqplig\textPUqplig
 21635 \let\textcentoldstyle\textslashc
 21636 \let\textbarc\textslashc
 21637 \let\inva\textturna
 21638 \let\vara\textscripta
 21639 \let\invscripta\textturnscripta
 21640 \let\rotvara\textturnscripta
 21641 \let\hookb\texthtb
 21642 \let\hausab\texthtb
 21643 \let\varopeno\textopeno
 21644 \let\curlyc\textctc
 21645 \let\taild\textrtaild
 21646 \let\hookd\texthtd
 21647 \let\hausad\texthtd
 21648 \let\er\textrhooschwa
 21649 \let\epsi\textniepsilon
 21650 \let\hookrepsilon\textrhooschwa
 21651 \let\closedrepsilon\textcloserepsilon
 21652 \let\barj\textbardotlessj
 21653 \let\hookg\texthtg
 21654 \let\varg\textscriptg
 21655 \let\vod\textipagamma
 21656 \let\invh\textturnh
 21657 \let\udesc\textturnh
 21658 \let\hookh\textthh
 21659 \let\voicedh\textthh
 21660 \let\hookheng\textthheng
 21661 \let\ibar\textbari
 21662 \let\vari\textniota
 21663 \let\tildel\textltilde
 21664 \let\latfric\textbeltl
 21665 \let\taill\texttrtail
 21666 \let\lz\textlyoghlig

21667 \let\invm\textturnm
 21668 \let\rotm\textturnm
 21669 \let\legm\textturnmrleg
 21670 \let\labdentainas\textltailm
 21671 \let\emgma\textltailm
 21672 \let\nj\textltailn
 21673 \let\enya\textltailn
 21674 \let\tainn\textrtailn
 21675 \let\closedniomega\textcloseomega
 21676 \let\varomega\textcloseomega
 21677 \let\invr\textturnr
 21678 \let\rotr\textturnr
 21679 \let\invlegr\textturnlonglegr
 21680 \let\tailinvr\textturnrrtail
 21681 \let\legr\textlonglegr
 21682 \let\tailr\textrtailr
 21683 \let\flapr\textfishhookr
 21684 \let\flap\textfishhookr
 21685 \let\tails\textrtails
 21686 \let\curlyesh\textctesh
 21687 \let\clickt\textturnt
 21688 \let\tailt\textrtailt
 21689 \let\ubar\textbaru
 21690 \let\rotOmega\textniupsilon
 21691 \let\invv\textturnv
 21692 \let\pwedge\textturnv
 21693 \let\invw\textturnw
 21694 \let\rotw\textturnw
 21695 \let\invy\textturny
 21696 \let\roty\textturny
 21697 \let\tailz\textrtailz
 21698 \let\curlyz\textctz
 21699 \let\curlyyogh\textctyogh
 21700 \let\ejective\textglotstop
 21701 \let\glottal\textglotstop
 21702 \let\reveject\textrevglotstop
 21703 \let\clickc\textstretchc
 21704 \let\textstretchcvar\textstretchc
 21705 \let\clickb\textbullseye
 21706 \let\textObullseye\textbullseye
 21707 \let\textctjvar\textctj
 21708 \let\textturnsck\textturnk
 21709 \let\dz\textdzlig
 21710 \let\tesh\texttshlig
 21711 \let\digamma\textdigammagreek
 21712 \let\hardsign\cyrhrdsn
 21713 \let\softsign\cyrsoftsn
 21714 \let\hebsin\hebshin
 21715 \let\textscck\textPUscck
 21716 \let\textscm\textPUscm
 21717 \let\textscp\textPUscp
 21718 \let\textrevscr\textPUrevscr
 21719 \let\textrhoocka\textPURhooka
 21720 \let\textrhoocke\textPURhooke
 21721 \let\textrhoockepsilon\textPURhookepsilon
 21722 \let\textrhoockopeno\textPURhookopeno
 21723 \let\textdoublevertline\textbardbl

21724 `\let\dag\textdagger`
 21725 `\let\ddagger\textdaggerdbl`
 21726 `\let\ddag\textdaggerdbl`
 21727 `\let\mathellipsis\textellipsis`
 21728 `\let\EurDig\texteuro`
 21729 `\let\EURdig\texteuro`
 21730 `\let\EurHv\texteuro`
 21731 `\let\EURhv\texteuro`
 21732 `\let\EurCr\texteuro`
 21733 `\let\EURcr\texteuro`
 21734 `\let\EurTm\texteuro`
 21735 `\let\EURtm\texteuro`
 21736 `\let\Eur\texteuro`
 21737 `\let\Denarius\textDeleatur`
 21738 `\let\agemO\textmho`
 21739 `\let\EstimatedSign\textestimated`
 21740 `\let\Ecommerce\textestimated`
 21741 `\let\bindnasrepma\textinvamp`
 21742 `\let\parr\textinvamp`
 21743 `\let\MVRightArrow\textrightarrow`
 21744 `\let\MVRightarrow\textrightarrow`
 21745 `\let\MVArrowDown\textdownarrow`
 21746 `\let\Force\textdownarrow`
 21747 `\let\textglobrise\textnearrow`
 21748 `\let\textglobfall\textsearrow`
 21749 `\let\Lightning\textlightning`
 21750 `\let\Conclusion\textrightarrow`
 21751 `\let\dashedleftarrow\textdashleftarrow`
 21752 `\let\dashedrightarrow\textdashrightarrow`
 21753 `\let\varnothing\textemptyset`
 21754 `\let\owns\textni`
 21755 `\let\notni\textnotowner`
 21756 `\let\varprop\textpropto`
 21757 `\let\varangle\textsphericalangle`
 21758 `\let\Anglesign\textsphericalangle`
 21759 `\let\AngleSign\textsphericalangle`
 21760 `\let\notdivides\textnmid`
 21761 `\let\varowedge\textowedge`
 21762 `\let\varovee\textovee`
 21763 `\let\varint\textint`
 21764 `\let\varoint\textoint`
 21765 `\let\downtherefore\textbecause`
 21766 `\let\textdotdiv\textdotminus`
 21767 `\let\AC\textsim`
 21768 `\let\wreath\textwr`
 21769 `\let\nthickapprox\textnapprox`
 21770 `\let\VHF\texttriplesim`
 21771 `\let\notasymp\textnasymp`
 21772 `\let\Doteq\textdoteqdot`
 21773 `\let\corresponds\texthateq`
 21774 `\let\Corresponds\texthateq`
 21775 `\let\nequal\textneq`
 21776 `\let\Congruent\textequiv`
 21777 `\let\NotCongruent\textnequiv`
 21778 `\let\notequiv\textnequiv`
 21779 `\let\LessOrEqual\textleq`
 21780 `\let\LargerOrEqual\textgeq`

21781 \let\apprle\textless
 21782 \let\apprge\textgtrsim
 21783 \let\varoplus\textoplus
 21784 \let\varominus\textominus
 21785 \let\varotimes\textotimes
 21786 \let\varoslash\textoslash
 21787 \let\varodot\textodot
 21788 \let\ocirc\textcircledcirc
 21789 \let\varocircle\textcircledcirc
 21790 \let\varoast\textcircledast
 21791 \let\oasterisk\textcircledast
 21792 \let\rightvdash\textvdash
 21793 \let\leftvdash\textdashv
 21794 \let\leftvdash\textndashv
 21795 \let\downvdash\texttop
 21796 \let\upvdash\textbot
 21797 \let\perp\textnupvdash
 21798 \let\models\textvDash
 21799 \let\models\textvDash
 21800 \let\models\textVdash
 21801 \let\models\textVdash
 21802 \let\models\textnvdash
 21803 \let\models\textnvDash
 21804 \let\models\textnvDash
 21805 \let\models\textnVdash
 21806 \let\models\textnVdash
 21807 \let\lessclosed\textlhd
 21808 \let\gtrclosed\textrhd
 21809 \let\leqclosed\textunlhd
 21810 \let\trianglelefteq\textunlhd
 21811 \let\geqclosed\textunrhd
 21812 \let\trianglerighteq\textunrhd
 21813 \let\Bowtie\textbowtie
 21814 \let\varcurlyvee\textcurlyvee
 21815 \let\varcurlywedge\textcurlywedge
 21816 \let\doublecap\textCap
 21817 \let\doublecup\textCup
 21818 \let\varsubsetneq\textsubsetneq
 21819 \let\varsupsetneq\textsupsetneq
 21820 \let\lessclosed\texttriangleleft
 21821 \let\ngtrclosed\texttriangleright
 21822 \let\Clocklogo\textclock
 21823 \let\ClockLogo\textclock
 21824 \let\baro\textstmaryrdbaro
 21825 \let\varparallel\textbbslash
 21826 \let\CleaningA\textCircledA
 21827 \let\Kutline\textCuttingLine
 21828 \let\CutLine\textCuttingLine
 21829 \let\Cutline\textCuttingLine
 21830 \let\MoveUp\textUParrow
 21831 \let\APLup\textbigtriangleup
 21832 \let\Bleech\textbigtriangleup
 21833 \let\MoveDown\textDOWNarrow
 21834 \let\APLdown\textbigtriangledown
 21835 \let\Diamond\textdiamond
 21836 \let\varbigcirc\textbigcircle
 21837 \let\Telefon\textPhone

21838 \let\Box\textboxempty
 21839 \let\CheckedBox\textCheckedbox
 21840 \let\XBox\textCrossedbox
 21841 \let\CrossedBox\textCrossedbox
 21842 \let\rightpointleft\textHandLeft
 21843 \let\leftpointright\textHandRight
 21844 \let\PointingHand\textHandRight
 21845 \let\Pointinghand\textHandRight
 21846 \let\Radiation\textRadioactivity
 21847 \let\Yinyang\textYinYang
 21848 \let\YingYang\textYinYang
 21849 \let\Yingyang\textYinYang
 21850 \let\Frowny\textfrownie
 21851 \let\Smiley\textsmiley
 21852 \let\Sun\textsun
 21853 \let\Mercury\textmercury
 21854 \let\textfemale\textPUfemale
 21855 \let\female\textPUfemale
 21856 \let\venus\textPUfemale
 21857 \let\Venus\textPUfemale
 21858 \let\Female\textPUfemale
 21859 \let\Earth\textearth
 21860 \let\mars\textmale
 21861 \let\Mars\textmale
 21862 \let\Male\textmale
 21863 \let\Jupiter\textjupiter
 21864 \let\Saturn\textsaturn
 21865 \let\Uranus\texturanus
 21866 \let\Neptune\textneptune
 21867 \let\Pluto\textpluto
 21868 \let\Aries\textaries
 21869 \let\Taurus\texttaurus
 21870 \let\Gemini\textgemini
 21871 \let\Cancer\textcancer
 21872 \let\Leo\textleo
 21873 \let\Virgo\textvirgo
 21874 \let\Libra\textlibra
 21875 \let\Scorpio\textscorpio
 21876 \let\Sagittarius\textsagittarius
 21877 \let\Capricorn\textcapricornus
 21878 \let\Aquarius\textaquarius
 21879 \let\Pisces\textpisces
 21880 \let\spadesuit\textspadesuitblack
 21881 \let\Heart\textheartsuitwhite
 21882 \let\heartsuit\textheartsuitwhite
 21883 \let\diamondsuit\textdiamondsuitwhite
 21884 \let\clubsuit\textclubsuitblack
 21885 \let\eighthnote\textmusicalnote
 21886 \let\Recycling\textrecycle
 21887 \let\VarFlag\textFlag
 21888 \let\textxswup\textdsmilitary
 21889 \let\textuncrfemale\textPUuncrfemale
 21890 \let\Football\textSoccerBall
 21891 \let\CutLeft\textScissorRightBrokenBottom
 21892 \let\Cutright\textScissorRightBrokenBottom
 21893 \let\RightScissors\textScissorRight
 21894 \let\Leftscissors\textScissorRight


```

21895 \let\Letter\textEnvelope
21896 \let\Writinghand\textWritingHand
21897 \let\checkmark\textCheckmark
21898 \let\dauidstar\textDavidStar
21899 \let\llbracket\textlbrackdbl
21900 \let\rrbracket\textrrackdbl
21901 \let\RightTorque\textlcurvearrowdown
21902 \let\Righttorque\textlcurvearrowdown
21903 \let\LeftTorque\textrcurvearrowdown
21904 \let\Lefttorque\textrcurvearrowdown
21905 \let\textvarobar\textobar
21906 \let\circledbslash\textobslash
21907 \let\obackslash\textobslash
21908 \let\varobslash\textobslash
21909 \let\odplus\textobot
21910 \let\varolessthan\textolessthan
21911 \let\varogreaterthan\textogreaterthan
21912 \let\divdot\textminusdot
21913 \let\doublesqcap\textsqdoublecap
21914 \let\doublesqcup\textsqdoublecup
21915 \let\merge\textdoublevee
21916 \let\leftVdash\textdashV
21917 \let\nleftVdash\textndashV
21918 \let\leftmodels\textDashv
21919 \let\nleftmodels\textnDashv
21920 \let\leftModels\textDashV
21921 \let\nleftModels\textnDashV
21922 \let\varparallel\textsslash
21923 \let\textheng\textPUheng
21924 \let\textlhookfour\textPUlhookfour
21925 \let\textscf\textPUscf
21926 \let\textaoilig\textPUaolig
21927 \let\Ganz\textfullnote
21928 \let\Halb\texthalfnote
21929 \let\Womanface\textWomanFace
21930 \let\Faxmachine\textFax
21931 \let\CEsign\textCESign
21932 }% \psdaliasnames
21933 </psdextra>

```

52 End of file hyccheck.tex

```

21934 <*check>
21935 \typeout{}
21936 \begin{document}
21937 \end{document}
21938 </check>

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