

Hypertext marks in L^AT_EX

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<https://github.com/ho-tex/hyperref/issues>

2017/03/14 v6.85a

1 Documentation overview for hyperref

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

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

README The **README** file (also available as text file). Here information is collected that is not yet in the manual: new features, package compatibility, limitations, known problems, ...


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 <*check>
2 \documentclass{article}
3 \makeatletter
```

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

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

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

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

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

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

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{%
19   \typeout{}}%
20   \begingroup
21   \edef\x{\endgroup
22     \noexpand\RequirePackage{\HyC@package}%
23     \ifx\HyC@date\@empty\relax\else\HyC@date\fi}%
24   }%
25   \x
26   \typeout{}}%
27   \typeout{%
28     * Package `HyC@package'%
29     \ifx\HyC@date\@empty
30       \else
31         \space\HyC@date
32       \fi
33   }%
34   \@ifundefined{ver@\HyC@package.sty}{%
35   }{%
36     \typeout{%
37       \space\space Loaded: `HyC@package' %
38       \cname ver@\HyC@package.sty\endcsname
39     }%
```

```

40 }%
41 }

```

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

```

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

```

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

```

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

```

`\HyC@checkcommand` The optional star of \LaTeX 's definitions is parsed.

```

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

```

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

```

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

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```


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

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

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

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

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

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

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

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

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

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

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

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

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

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 LuaTeX compatibility

Until a LuaTeX driver is written, load `luatex85` so that the `pdfTeX` driver continues to work with LuaTeX.

```
165 %\ifx\directlua\@undefined\else
166 % \RequirePackage{luatex85}
167 %\fi
```

4.2 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`.

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

`\Hy@SetCatcodes`

```
184 \def\Hy@SetCatcodes{%
185   \@makeother`\%
186   \@makeother\=%
187   \catcode`\$=3 %
188   \catcode`\&=4 %
189   \catcode`\^=7 %
190   \catcode`\_ =8 %
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   \@makeother\- %
205   \@makeother\" %
```

```

206 \@makeother\'%
207 }

```

\Hy@RestoreCatcodes

```

208 \begingroup
209 \def\x#1{\catcode`\noexpand#1=\the\catcode`#1\relax}%
210 \xdef\Hy@RestoreCatcodes{%
211   \the\toks@
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   \x\-%
230   \x\"%
231   \x\'%
232 }%
233 \endgroup

234 \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.

```

235 \IfFileExists{hobsub-hyperref.sty}{%
236   \RequirePackage{hobsub-hyperref}[2011/01/30]%
237 }{}

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

```

```

255 \fi
256 }%
257 }

258 \RequirePackage{infwarerr}[2010/04/08]
259 \RequirePackage{keyval}[1997/11/10]
260 \RequirePackage{kvsetkeys}[2007/09/29]
261 \RequirePackage{kvdefinekeys}[2011/04/07]
262 \RequirePackage{pdfescape}[2007/11/11]
263 \RequirePackage{ifvtex}
264 \RequirePackage{ifxetex}[2006/08/21]
265 \RequirePackage{hycolor}
266 \RequirePackage{letltxmacro}[2008/06/13]
267 \RequirePackage{auxhook}[2009/12/14]
268 \def\Hy@Error{\@PackageError{hyperref}}
269 \def\Hy@Warning{\@PackageWarning{hyperref}}
270 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
271 \def\Hy@Info{\@PackageInfo{hyperref}}
272 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
273 \def\Hy@Message#1{%
274   \GenericWarning{%
275     (hyperref)\@spaces\@spaces\@spaces\@spaces
276   }{%
277     Package hyperref Message: #1\ltx@gobble
278   }%
279 }

```

4.3 Version check

\Hy@VersionChecked

```

280 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

281 \def\Hy@VersionCheck#1{%
282   \begingroup
283   \ltx@ifundefined{ver@hyperref.sty}{%
284     \Hy@Error{%
285       This should not happen!\MessageBreak
286       Missing hyperref version%
287     }\@ehd
288   }{%
289     \ltx@ifundefined{ver@#1}{%
290       \Hy@Error{%
291         This should not happen!\MessageBreak
292         Missing version of `#1'%
293       }\@ehd
294     }{%
295       \def\x##1##2##3{%
296         \expandafter\expandafter\expandafter\Hy@@VersionCheck
297         \expandafter\expandafter\expandafter##2%
298         \csname ver@##3\endcsname##1##1\@nil
299       }%
300       \x{ }\y{hyperref.sty}%
301       \x{ }\z{#1}%
302       \ifx\y\z
303       \else
304         \edef\a{#1}%

```

```

305     \edef\b{\HyOpt@CustomDriver.def}%
306     \ifx\a\b
307         \Hy@WarningNoLine{%
308             Version mismatch (custom driver)!\MessageBreak
309             * \y: hyperref.sty\MessageBreak
310             * \z: \a
311         }%
312     \else
313         \Hy@Error{%
314             Version mismatch!\MessageBreak
315             * \y: hyperref.sty\MessageBreak
316             * \z: \a
317         }\@ehd
318     \fi
319 \fi
320 }%
321 }%
322 \endgroup
323 \chardef\Hy@VersionChecked=1 %
324 }

```

\Hy@@VersionCheck

```

325 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
326 \def#1{#2 #3}%
327 }

```

4.4 Checks with regular expressions

```

328 \ltx@ifundefined{pdfmatch}{%
329 \def\Hy@Match#1#2#3#4#5{%
330 }{%
331 \def\Hy@Match#1#2#3{%
332 \begingroup
333 \edef\~{\ltx@backslashchar\string~}%
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*}%
341 \edef\+\{\ltx@backslashchar+}%
342 \edef\?\{\ltx@backslashchar?}%
343 \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
344 \edef\}\{\ltx@rightbracechar}%
345 \edef\\\{\ltx@backslashchar\ltx@backslashchar}%
346 \let\ \ltx@space
347 \ifcase\pdfmatch#2{#3}{#1} %
348 \endgroup
349 \expandafter\ltx@secondoftwo
350 \or
351 \endgroup
352 \expandafter\ltx@firstoftwo
353 \else
354 \Hy@Warning{%
355     Internal error: Wrong pattern!\MessageBreak
356     --> #3 <--\MessageBreak

```

```

357     Pattern check ignored%
358   }%
359   \endgroup
360   \expandafter\ltx@firstoftwo
361   \fi
362 }%
363 \ltx@ifpackagelater{ltxcmds}{2010/09/11}{%
364   \begingroup
365     \lccode`0=`{\relax
366     \lowercase{\endgroup
367     \def\ltx@leftbracechar{0}%
368   }%
369   \begingroup
370     \lccode`0=`{\relax
371     \lowercase{\endgroup
372     \def\ltx@rightbracechar{0}%
373   }%
374 }%
375 }

```

4.5 Compatibility with format dumps

`\AfterBeginDocument` For use with pre-compiled formats, created using the `ldump` package, there needs to be 2 hooks for adding material delayed until `\begin{document}`. These are called `\AfterBeginDocument` and `\AtBeginDocument`. If `ldump` is not loaded, then a single hook suffices for normal L^AT_EX processing.

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

```

376 \@ifundefined{AfterBeginDocument}{%
377   \def\AfterBeginDocument{\AtBeginDocument}%
378 }{}%

```

`\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.

```

379 \def\Hy@AtBeginDocument{%
380   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
381 }

```

`\Hy@AtEndOfPackage`

```

382 \def\Hy@AtEndOfPackage{%
383   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
384 }

```

`\Hy@AtBeginDocumentHook`

```

385 \let\Hy@AtBeginDocumentHook\ltx@empty

```

`\Hy@AtEndOfPackageHook`

```

386 \let\Hy@AtEndOfPackageHook\ltx@empty

```

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

```

387 \AtEndOfPackage{%
388   \Hy@AtEndOfPackageHook
389   \let\Hy@AtEndOfPackageHook\@undefined
390   \AfterBeginDocument{%

```

```

391 \Hy@AtBeginDocumentHook{}%
392 \let\Hy@AtBeginDocumentHook\@undefined
393 }%
394 }

```

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

```

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

```

4.6 Switches

```

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

```



```

442 \let\Hy@debugtrue\Hy@verbosetrue
443 \let\Hy@debugfalse\Hy@verbosefalse
444 \newif\ifHy@pdfwindowui
445 \newif\ifHy@pdfdisplaydoctitle
446 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

488 \newdimen\@linkdim
489 \let\Hy@driver\ltx@empty
490 \let\MaybeStopEarly\relax

```

```

491 \newcount\Hy@linkcounter
492 \newcount\Hy@pagecounter
493 \Hy@linkcounter0
494 \Hy@pagecounter0

```

5.1 Macros for recursions

```

495 \let\Hy@ReturnEnd\@empty
496 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
497 \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.

```

498 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
499 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

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

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

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

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalsbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalsbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalsbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalsbpdef`. Limitations:
 - Works only in options that use `\hypercalsbpdef` (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 \hypercalsbp{\paperheight-\topmargin-1in
    -\headheight-\headsep}
}

```

`\hypercalsbp`

```

500 \begingroup\expandafter\expandafter\expandafter\endgroup
501 \expandafter\ifx\csname dimexpr\endcsname\relax
502 \def\hypercalsbpdef#1#2{%
503   \begingroup
504     \toks@{\}%
505     \HyCal@scan#2\hypercalsbp\@nil
506   \expandafter\endgroup

```

```

507 \expandafter\def\expandafter#1\expandafter{\the\toks@}%
508 }%
509 \def\HyCal@scan#1\hypercalcbp#2\@nil{%
510 \toks@\expandafter{\the\toks@ #1}%
511 \ifx\#2\%
512 \else
513 \ltx@ReturnAfterFi{%
514 \HyCal@do#2\@nil
515 }%
516 \fi
517 }%
518 \def\HyCal@do#1#2\@nil{%
519 \@ifpackageloaded{calc}{}{%
520 \Hy@Warning{%
521 For calculations \string\hypercalcbp\space needs\MessageBreak
522 package calc or e-TeX%
523 }%
524 }%
525 \setlength{\dimen@}{#1}%
526 \setlength{\dimen@}{0.99626401\dimen@}%
527 \edef\x{%
528 \toks@{%
529 \the\toks@
530 \strip@pt\dimen@
531 }%
532 }\x
533 \HyCal@scan#2\@nil
534 }%
535 \else
536 \def\hypercalcbp#1{%
537 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
538 }%
539 \def\hypercalcbpdef{\def}%
540 \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 ddd

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

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
542 \begingroup
```

6.2.1 Preprocessing

Octal escape sequences. To avoid problems with eight bit or non printable characters, the octal escape notation is supported. So most glyphs in the encoding definitions for PD1 and PU produce these octal escape sequences. All three octal digits have to be used:

- Wrong results are avoided, if digits follow that are not part of the octal sequence.
- Macros rely on the fact that the octal sequences always consist of three digits (vtex driver, Unicode support).

The escape sequences start with a backslash. By `\string` it will be printed. Therefore it is ensured that the \TeX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard \LaTeX behaviour.

```
543 \escapechar`\\%
```

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

```
544 \edef\0{\string\0}%
545 \edef\1{\string\1}%
546 \edef\2{\string\2}%
547 \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.

```
548 \ifHy@unicode
549 \edef\8{\string\8}%
550 \edef\9{\string\9}%
551 \fontencoding{PU}%
552 \HyPsd@UTFviii
553 \def\ifpdfstringunicode###1##2{##1}%
554 \else
555 \fontencoding{PD1}%
556 \def\ifpdfstringunicode###1##2{##2}%
557 \fi
558 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
559 \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).

```
560 \@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).

```
561 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
562 \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.

```
563 \let\{\textbraceleft
564 \let\}\textbraceright
```

```

565 \let\\\textbackslash
566 \let\#\textnumbersign
567 \let\$\textdollar
568 \let\%\textpercent
569 \let\&\textampersand
570 % \let\~\textasciitilde
571 \let\_ \textunderscore
572 \let\P\textparagraph
573 \let\ldots\textellipsis
574 \let\dots\textellipsis

```

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.

```

575 \def\{\pdfstringdefWarn\}%
576 \def\newline{\pdfstringdefWarn\newline}%

```

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

```

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

```

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

```

590 \let\fontencoding\@gobble
591 \let\fontfamily\@gobble
592 \let\fontseries\@gobble
593 \let\fontshape\@gobble
594 \let\fontsize\@gobbletwo
595 \let\selectfont\@empty
596 \let\usefont\@gobblefour
597 \let\emph\@firstofone
598 \let\textnormal\@firstofone
599 \let\textrm\@firstofone
600 \let\textsf\@firstofone

```

```

601 \let\texttt\@firstofone
602 \let\textbf\@firstofone
603 \let\textmd\@firstofone
604 \let\textit\@firstofone
605 \let\textsc\@firstofone
606 \let\textsl\@firstofone
607 \let\textup\@firstofone
608 \let\normalfont\@empty
609 \let\rmfamily\@empty
610 \let\sffamily\@empty
611 \let\ttfamily\@empty
612 \let\bfseries\@empty
613 \let\mdseries\@empty
614 \let\itshape\@empty
615 \let\scshape\@empty
616 \let\slshape\@empty
617 \let\upshape\@empty
618 \let\em\@empty
619 \let\rm\@empty
620 \let\Huge\@empty
621 \let\LARGE\@empty
622 \let\Large\@empty
623 \let\footnotesize\@empty
624 \let\huge\@empty
625 \let\large\@empty
626 \let\normalsize\@empty
627 \let\scriptsize\@empty
628 \let\small\@empty
629 \let\tiny\@empty
630 \let\mathversion\@gobble
631 \let\phantom\@gobble
632 \let\vphantom\@gobble
633 \let\hphantom\@gobble

```

Package pifont.

```

634 \let\ding\HyPsd@ding
635 \let\Cube\HyPsd@DieFace
636 %* \HyPsd@DieFace -> \epsdice (epsdice)
637 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

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

```

Package color.

```

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

```

Upper- and lowercase.

```

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

```

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

```

643 \ifHy@psdextra

```

```

644 \ifHy@unicode
645 \csname psdmapshortnames\endcsname
646 \csname psdaliasnames\endcsname
647 \fi
648 \fi

```

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

```

649 \let\foreignlanguage\@secondoftwo
650 \let\textlatin\@firstofone
651 \ltx@ifundefined{language@group}{-}{%
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 L^AT_EX 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 T_EX's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in #2 additional redefinitions can be added by the hook \pdfstringdef-PreHook.

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

```
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 LATEX as follows:

```

```

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

```

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

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

```

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 litte more complicate:

- `TEX` does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't find by `TEX`'s argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by an marker for the xspace support.

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

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

```

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 a 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 \iffHy@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 be removed later.

```
758 \iffHy@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 \ltx@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 }%
820 \else
821 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
822 {utf16be}{pdfdoc}{%
823 \EdefEscapeString\HyPsd@temp\HyPsd@temp
824 \global\let#1\HyPsd@temp
825 \HyPsd@EscapeTeX#1%
826 \Hy@unicodedefalse
827 }{}%
828 \fi
829 }%
830 \fi
831 \fi
832 \HyPsd@XeTeXBigCharsfalse

```

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

```

833 \pdfstringdefPostHook#1%
834 \endgroup
835 }

```

\Hy@pdfstringdef

```

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

```

6.3 Encodings

6.3.1 XeTeX

```
840 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
841 \catcode\z@=12 %
842 \ifxetex
843   \expandafter\@firstofone
844 \else
845   \let\HyPsd@XeTeXBigCharstrue\@empty
846   \let\HyPsd@XeTeXBigCharsfalse\@empty
847   \expandafter\@gobble
848 \fi
849 {%
850   \newif\ifHyPsd@XeTeXBigChars
851   \def\HyPsd@XeTeXBigCharsfalse{%
852     \global\let\ifHyPsd@XeTeXBigChars\iffalse
853   }%
854   \def\HyPsd@XeTeXBigCharstrue{%
855     \global\let\ifHyPsd@XeTeXBigChars\iftrue
856   }%
857   \def\HyPsd@ToBigChars#1{%
858     \ifHyPsd@XeTeXBigChars
859       \EdefEscapeHex\HyPsd@UnescapedString{%
860         \expandafter\@gobbletwo\HyPsd@UnescapedString
861       }%
862       \begingroup
863       \toks@{%}%
864       \escapechar=92\relax
865       \let\x\HyPsd@ToBigChar
866       \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
867       \relax\relax\relax\relax\relax\relax\relax
868       \edef\x{%
869         \endgroup
870         \gdef\noexpand#1{\the\toks@}%
871       }%
872       \x
873     \fi
874   }%
875   \def\HyPsd@ToBigChar#1#2#3#4{%
876     \ifx\relax#1\relax
877       \let\x\relax
878     \else
879       \count@="#1#2#3#4\relax
880       \let\y\@empty
881       \lccode\z@=\count@
882       \ifnum\count@=40 % (
883         \let\y\@backslashchar
884       \else
885         \ifnum\count@=41 % )
886         \let\y\@backslashchar
887       \else
888         \ifnum\count@=92 % backslash
889         \let\y\@backslashchar
890       \else
891         \ifnum\count@=10 % newline
892         \edef\y##1{\string\n}%
893       \else
```



```

894         \ifnum\count@=13 % carriage return
895         \edef\y##1{\string\r}%
896         \fi
897     \fi
898 \fi
899 \fi
900 \fi
901 \lowercase{%
902     \toks@\expandafter{%
903         \the\expandafter\toks@
904         \y
905         ^^@%
906     }%
907 }%
908 \fi
909 \x
910 }%
911 }
912 \Hy@temp

```

6.3.2 Workaround for package linguex

```

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

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

932 \def\Hy@SaveCatcodeSettings#1{%
933     \expandafter\edef\csname Hy@cat@#1\endcsname{%
934         \endlinechar=\the\endlinechar\relax
935         \catcode32 \the\catcode32\relax % (space)
936         \catcode34 \the\catcode34\relax % "
937         \catcode35 \the\catcode35\relax % #
938         \catcode37 \the\catcode37\relax % (percent)
939         \catcode40 \the\catcode40\relax % (
940         \catcode41 \the\catcode41\relax % )
941         \catcode42 \the\catcode42\relax % *
942         \catcode46 \the\catcode46\relax % .
943         \catcode58 \the\catcode58\relax % :
944         \catcode60 \the\catcode60\relax % <
945         \catcode61 \the\catcode61\relax % =

```

```

946 \catcode62 \the\catcode62\relax % >
947 \catcode64 \the\catcode64\relax % @
948 \catcode91 \the\catcode91\relax % [
949 \catcode92 \the\catcode92\relax % \
950 \catcode93 \the\catcode93\relax % ]
951 \catcode123 \the\catcode123\relax % {
952 \catcode124 \the\catcode124\relax % |
953 \catcode125 \the\catcode125\relax % }
954 }%
955 \endlinechar=-1 %
956 \catcode32 10 % (space)
957 \catcode34 12 % "
958 \catcode35 6 % #
959 \catcode37 14 % (percent)
960 \catcode40 12 % (
961 \catcode41 12 % )
962 \catcode42 12 % *
963 \catcode46 12 % .
964 \catcode58 12 % :
965 \catcode60 12 % <
966 \catcode61 12 % =
967 \catcode62 12 % >
968 \catcode91 12 % [
969 \catcode92 0 % \
970 \catcode93 12 % ]
971 \catcode123 1 % {
972 \catcode124 12 % |
973 \catcode125 2 % }
974 \makeatletter
975 }

```

\Hy@RestoreCatcodeSettings

```

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

```

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.

```

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

```

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

`\HyPsd@LoadExtra`

```

1002 \def\HyPsd@LoadExtra{%
1003   \ifHy@psdextra
1004     \ltx@iffileloaded{puenc.def}{%
1005       \Hy@SaveCatcodeSettings{psdextra}%
1006       \input{psdextra.def}%
1007       \Hy@RestoreCatcodeSettings{psdextra}%
1008       \let\HyPsd@LoadExtra\relax
1009     }{%
1010     \fi
1011 }
```

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 expandable macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by T_EX's stomach, the second contains the replacement for PDF strings.

```

1012 \def\texorpdfstring{%
1013   \ifHy@pdfstring
1014     \expandafter\@secondoftwo
1015   \else
1016     \expandafter\@firstoftwo
1017   \fi
1018 }
```

6.4.2 Hooks for `\pdfstringdef`

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

```

1019 \@ifundefined{pdfstringdefPreHook}{%
1020   \let\pdfstringdefPreHook\empty
1021 }
```

```

1022 \@ifundefined{pdfstringdefPostHook}{%
1023   \let\pdfstringdefPostHook\@gobble
1024 }{}

```

`\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`.

```

1025 \def\pdfstringdefDisableCommands{%
1026   \begingroup
1027   \makeatletter
1028   \HyPsd@DisableCommands
1029 }

```

`\HyPsd@DisableCommands`

```

1030 \long\def\HyPsd@DisableCommands#1{%
1031   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1032   \endgroup
1033 }

```

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

```

1034 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
1035 \AtBeginDocument{%
1036   \@ifundefined{pdfstringdefDisableCommands}{%
1037     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
1038   }{}%
1039 }

```

`\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`.

```

1040 \def\pdfstringdefWarn#1{%
1041   \expandafter\noexpand\csname<>-string#1\endcsname
1042 }

```

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.

```
1043 \begingroup
1044 \catcode0=12 %
1045 \def\x{\endgroup
1046   \def\HyPsd@ignorespaces{%
1047     \romannumeral\expandafter`\expandafter^^@%
1048     \romannumeral^^@%
1049   }%
1050 }%
1051 \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`.

```
1052 \def\HyPsd@BabelPatch{%
1053   \let\HyOrg@languageshorthands\languageshorthands
1054   \let\languageshorthands\HyPsd@LanguageShorthands
1055 }
1056 \begingroup\expandafter\expandafter\expandafter\endgroup
1057 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
1058   \let\HyPsd@langshort@system\@empty
1059   \def\HyPsd@LanguageShorthands#1{%
1060     \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
1061       \HyPsd@langshort@system
1062     \expandafter\@gobble
1063   \else
1064     \expandafter\@firstofone
1065   \fi
1066   {%
1067     \HyOrg@languageshorthands{#1}%
1068   }%
1069 }%
1070 \else
1071   \def\HyPsd@LanguageShorthands#1{%
1072     \ifnum\pdf@strcmp{#1}{system}=\z@
1073       \expandafter\@gobble
1074     \else
1075       \expandafter\@firstofone
1076     \fi
1077     {%
1078       \HyOrg@languageshorthands{#1}%
1079     }%
1080   }%
1081 }
```

```

1079 }%
1080 }%
1081 \fi
1082 \def\Hy@temp{%
1083 \ifpackageloaded{babel}{%
1084 \ifpackagelater{babel}{2008/03/16}{%
1085 \let\Hy@temp\@empty
1086 }{%
1087 \def\HyPsd@BabelPatch{%
1088 \let\HyOrg@languageshorthands\languageshorthands
1089 }%
1090 }%
1091 }{}%
1092 }
1093 \Hy@temp
1094 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1095 \newif\ifHy@next

Nothing to do for english.
1096 \ltx@ifundefined{danish@sh@":@sel}{ }{%
1097 \def\HyPsd@babel@danish{%
1098 \declare@shorthand{danish}{"}{|}%
1099 \declare@shorthand{danish}{"}{~}{-}%
1100 }%
1101 }
1102 \ltx@ifundefined{dutch@sh@":@sel}{ }{%
1103 \def\HyPsd@babel@dutch{%
1104 \declare@shorthand{dutch}{"}{|}%
1105 \declare@shorthand{dutch}{"}{~}{-}%
1106 }%
1107 }
1108 \ltx@ifundefined{finnish@sh@":@sel}{ }{%
1109 \def\HyPsd@babel@finnish{%
1110 \declare@shorthand{finnish}{"}{|}%
1111 }%
1112 }
1113 \ltx@ifundefined{french@sh@":@sel}{ }{%
1114 \def\HyPsd@babel@frenchb{%
1115 \def\guill@spacing{ }%
1116 }%
1117 }
1118 \ltx@ifundefined{german@sh@":@sel}{ }{%
1119 \def\HyPsd@babel@german{%
1120 \declare@shorthand{german}{"}{f}{f}%
1121 \declare@shorthand{german}{"}{|}%
1122 \declare@shorthand{german}{"}{~}{-}%
1123 }%
1124 }
1125 \ltx@ifundefined{macedonian@sh@":@sel}{ }{%
1126 \def\HyPsd@babel@macedonian{%
1127 \declare@shorthand{macedonian}{"}{|}%
1128 \declare@shorthand{macedonian}{"}{~}{-}%
1129 }%
1130 }{}
1131 \ltx@ifundefined{ngerman@sh@":@sel}{ }{%
1132 \def\HyPsd@babel@ngerman{%
1133 \declare@shorthand{ngerman}{"}{|}%

```

```

1134 \declare@shorthand{ngerman}{"-"}{-}%
1135 }%
1136 }
1137 \ltx@ifundefined{portuges@sh@"@sel}{-}{-}%
1138 \def\HyPsd@babel@portuges{%
1139 \declare@shorthand{portuges}{"}{|}{-}%
1140 }%
1141 }
1142 \ltx@ifundefined{russian@sh@"@sel}{-}{-}%
1143 \def\HyPsd@babel@russian{%
1144 \declare@shorthand{russian}{"}{|}{-}%
1145 \declare@shorthand{russian}{"-"}{-}%
1146 }%
1147 }
1148 \ltx@ifundefined{slovene@sh@"@sel}{-}{-}%
1149 \def\HyPsd@babel@slovene{%
1150 \declare@shorthand{slovene}{"}{|}{-}%
1151 }%
1152 }

```

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

```

1153 \ltx@ifundefined{spanish@sh@>@sel}{-}{-}%
1154 \def\HyPsd@babel@spanish{%
1155 \declare@shorthand{spanish}{<<}{\guillemotleft}%
1156 \declare@shorthand{spanish}{>>}{\guillemotright}%
1157 \declare@shorthand{spanish}{=} {-}%
1158 \declare@shorthand{spanish}{~} {-}%
1159 \declare@shorthand{spanish}{!}{\textexclamdown}%
1160 \declare@shorthand{spanish}{?}{\textquestiondown}%
1161 }%
1162 }
1163 \ltx@ifundefined{swedish@sh@"@sel}{-}{-}%
1164 \def\HyPsd@babel@swedish{%
1165 \declare@shorthand{swedish}{"}{|}{-}%
1166 \declare@shorthand{swedish}{"-"}{-}%
1167 }%
1168 }
1169 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{-}%
1170 \def\HyPsd@babel@ukrainian{%
1171 \declare@shorthand{ukrainian}{"}{|}{-}%
1172 \declare@shorthand{ukrainian}{"-"}{-}%
1173 }%
1174 }
1175 \ltx@ifundefined{usorbian@sh@"@sel}{-}{-}%
1176 \def\HyPsd@babel@usorbian{%
1177 \declare@shorthand{usorbian}{f}{f}%
1178 \declare@shorthand{usorbian}{"}{|}{-}%
1179 }%
1180 }
1181 \ltx@ifundefined{greek@sh@\string~@sel}{-}{-}%
1182 \let\HyPsd@GreekPatch\@empty
1183 }%
1184 \def\HyPsd@GreekPatch{%
1185 \let\greeknumeral\HyPsd@greeknumeral
1186 \let\Greeknnumeral\HyPsd@Greeknnumeral
1187 }%
1188 }
1189 \def\HyPsd@greeknumeral#1{%

```

```

1190 \HyPsd@GreekNum\@firstoftwo{#1}%
1191 }
1192 \def\HyPsd@Greeknumeral#1{%
1193 \HyPsd@GreekNum\@secondoftwo{#1}%
1194 }
1195 \def\HyPsd@GreekNum#1#2{%
1196 \ifHy@unicode
1197 \ifnum#2<\@ne
1198 \@arabic{#2}%
1199 \else
1200 \ifnum#2<1000000 %
1201 \HyPsd@@GreekNum#1{#2}%
1202 \else
1203 \@arabic{#2}%
1204 \fi
1205 \fi
1206 \else
1207 \@arabic{#2}%
1208 \fi
1209 }
1210 \def\HyPsd@@GreekNum#1#2{%
1211 \ifnum#2<\@m
1212 \ifnum#2<10 %
1213 \expandafter\HyPsd@GreekNumI
1214 \expandafter\@gobble\expandafter#1\number#2%
1215 \else
1216 \ifnum#2<100 %
1217 \expandafter\HyPsd@GreekNumII
1218 \expandafter\@gobble\expandafter#1\number#2%
1219 \else
1220 \expandafter\HyPsd@GreekNumIII
1221 \expandafter\@gobble\expandafter#1\number#2%
1222 \fi
1223 \fi
1224 \ifnum#2>\z@
1225 \textnumeralsigngreek
1226 \fi
1227 \else
1228 \ifnum#2<\@M
1229 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1230 \else
1231 \ifnum#2<100000 %
1232 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1233 \else
1234 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1235 \fi
1236 \fi
1237 \fi
1238 }
1239 \def\HyPsd@GreekNumI#1#2#3{%
1240 #1{%
1241 \ifnum#3>\z@
1242 \textnumeralsignlowergreek
1243 \fi
1244 }%
1245 \expandafter#2%
1246 \ifcase#3 %

```



```

1247  {}{}%
1248  \or\textalpha\textAlpha
1249  \or\textbeta\textBeta
1250  \or\textgamma\textGamma
1251  \or\textdelta\textDelta
1252  \or\textepsilon\textEpsilon
1253  \or\textstigmagreek\textStigmagreek
1254  \or\textzeta\textZeta
1255  \or\texteta\textEta
1256  \or\texttheta\textTheta
1257  \else
1258  {}{}%
1259  \fi
1260 }
1261 \def\HyPsd@GreekNumII#1#2#3#4{%
1262   #1{%
1263     \ifnum#3>\z@
1264       \textnumeralsignlowergreek
1265     \fi
1266   }%
1267   \expandafter#2%
1268   \ifcase#3 %
1269     {}{}%
1270     \or\textiota\textIota
1271     \or\textkappa\textKappa
1272     \or\textlambda\textLambda
1273     \or\textmu\textMu
1274     \or\textnu\textNu
1275     \or\textxi\textXi
1276     \or\textomicron\textOmicron
1277     \or\textpi\textPi
1278     \or\textkoppagreek\textKoppagreek
1279     \else
1280       {}{}%
1281     \fi
1282   \HyPsd@GreekNumI#1#2#4%
1283 }
1284 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1285   #1{%
1286     \ifnum#3>\z@
1287       \textnumeralsignlowergreek
1288     \fi
1289   }%
1290   \expandafter#2%
1291   \ifcase#3 %
1292     {}{}%
1293     \or\extrho\textRho
1294     \or\textsigma\textSigma
1295     \or\texttau\textTau
1296     \or\textupsilon\textUpsilon
1297     \or\textphi\textPhi
1298     \or\textchi\textChi
1299     \or\textpsi\textPsi
1300     \or\textomega\textOmega
1301     \or\textsampigreek\textSampigreek
1302     \else
1303       {}{}%

```

```

1304 \fi
1305 \HyPsd@GreekNumII#1#2#4#5%
1306 }
1307 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1308 \HyPsd@GreekNumI\@firstofone#1#2%
1309 \HyPsd@@@GreekNum#1{#3#4#5}%
1310 }
1311 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1312 \HyPsd@GreekNumII\@firstofone#1#2#3%
1313 \HyPsd@@@GreekNum#1{#4#5#6}%
1314 }
1315 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1316 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1317 \HyPsd@@@GreekNum#1{#5#6#7}%
1318 }

1319 \def\HyPsd@SpanishPatch{%
1320 \ltx@ifundefined{es@save@dot}{%
1321 }{%
1322 \let\.\es@save@dot
1323 }%
1324 }

```

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

```

1325 \def\HyPsd@RussianPatch{%
1326 \ltx@ifundefined{russian@sh@"@-@}{%
1327 }{%
1328 \@namedef{russian@sh@"@-@}{-}%
1329 }%
1330 }

```

6.5.3 CJK patch

```

1331 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1332 \def\HyPsd@CJKhook{%
1333 \ltx@ifpackageloaded{CJK}{%
1334 \let\CJK@kern\relax
1335 \let\CJKkern\relax
1336 \let\CJK@CJK\relax
1337 \ifHy@CJKbookmarks
1338 \HyPsd@CJKhook@bookmarks
1339 \fi
1340 \HyPsd@CJKhook@unicode
1341 }{}%
1342 }

```

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 ($\geq 0x40$).

```

1343 \begingroup
1344 \catcode"7F=\active
1345 \toks@{%
1346 \let\CJK@ignorespaces\empty
1347 \def\CJK@char#1{\@gobbletwo}%
1348 \let\CJK@charx\@gobblefour
1349 \let\CJK@punctchar\@gobblefour
1350 \def\CJK@punctcharx#1{\@gobblefour}%
1351 \catcode"7F=\active
1352 \def^^7f#1^^7f#2^^7f{%
1353 \string #1\HyPsd@DecimalToOctal{#2}%
1354 }%
1355 % ... ?
1356 \ifHy@unicode
1357 \def\Hy@cjkpu{\80}%
1358 \else
1359 \let\Hy@cjkpu\@empty
1360 \fi
1361 \HyPsd@CJKActiveChars
1362 }%
1363 \count@=127 %
1364 \@whilenum\count@<255 \do{%
1365 \advance\count@ by 1 %
1366 \lccode`\~=\count@
1367 \lowercase{%
1368 \toks@\expandafter{\the\toks@ ~}%
1369 }%
1370 }%
1371 \toks@\expandafter{\the\toks@ !}%
1372 \xdef\HyPsd@CJKhook@bookmarks{%
1373 \the\toks@
1374 }%
1375 \endgroup

```

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

```

1376 \def\HyPsd@CJKActiveChars#1{%
1377 \ifx#1!%
1378 \let\HyPsd@CJKActiveChars\relax
1379 \else
1380 \edef#1{\noexpand\Hy@cjkpu\string#1}%
1381 \fi
1382 \HyPsd@CJKActiveChars
1383 }

```

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

```

1384 \def\HyPsd@DecimalToOctal#1{%
1385 \ifcase #1 %
1386 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1387 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1388 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1389 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1390 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1391 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1392 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%

```

```

1393 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1394 \or @\or A\or B\or C\or D\or E\or F\or G%
1395 \or H\or I\or J\or K\or L\or M\or N\or O%
1396 \or P\or Q\or R\or S\or T\or U\or V\or W%
1397 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1398 \or \140\or a\or b\or c\or d\or e\or f\or g%
1399 \or h\or i\or j\or k\or l\or m\or n\or o%
1400 \or p\or q\or r\or s\or t\or u\or v\or w%
1401 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1402 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1403 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1404 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1405 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1406 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1407 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1408 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1409 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1410 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1411 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1412 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1413 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1414 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1415 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1416 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1417 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1418 \fi
1419 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1420 \def\HyPsd@CJKhook@unicode{%
1421 \let\Unicode\HyPsd@CJK@Unicode
1422 \let\CJKnumber\HyPsd@CJKnumber
1423 \let\CJKdigits\HyPsd@CJKdigits
1424 }

```

\HyPsd@CJK@Unicode

```

1425 \def\HyPsd@CJK@Unicode#1#2{%
1426 \ifnum#1<256 %
1427 \HyPsd@DecimalToOctalFirst{#1}%
1428 \HyPsd@DecimalToOctalSecond{#2}%
1429 \else
1430 \933%
1431 \expandafter\expandafter\expandafter\HyPsd@HighA
1432 \intcalcDiv{#1}{4}!%
1433 \933%
1434 \ifcase\intcalcMod{#1}{4} %
1435 4\or 5\or 6\or 7%
1436 \fi
1437 \HyPsd@DecimalToOctalSecond{#2}%
1438 \fi
1439 }

1440 \def\HyPsd@HighA#1!{%
1441 \expandafter\expandafter\expandafter\HyPsd@HighB
1442 \IntCalcDiv#1!64!!%

```

```

1443 \expandafter\expandafter\expandafter\HyPsd@HighD
1444 \IntCalcMod#1!64!!%
1445 }
1446 \def\HyPsd@HighB#1!{%
1447 \expandafter\expandafter\expandafter\HyPsd@HighC
1448 \IntCalcDec#1!!%
1449 }
1450 \def\HyPsd@HighC#1!{%
1451 \IntCalcDiv#1!4!%
1452 \@backslashchar
1453 \IntCalcMod#1!4!%
1454 }
1455 \def\HyPsd@HighD#1!{%
1456 \ifcase\IntCalcDiv#1!8! %
1457 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1458 \fi
1459 \ifcase\IntCalcMod#1!8! %
1460 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1461 \fi
1462 }
1463 \def\HyPsd@DecimalToOctalFirst#1{%
1464 \9%
1465 \ifcase#1 %
1466 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1467 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1468 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1469 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1470 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1471 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1472 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1473 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1474 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1475 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1476 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1477 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1478 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1479 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1480 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1481 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1482 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1483 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1484 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1485 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1486 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1487 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1488 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1489 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1490 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1491 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1492 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1493 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1494 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1495 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1496 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1497 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1498 \fi
1499 }

```

```

1500 \def\HyPsd@DecimalToOctalSecond#1{%
1501   \ifcase #1 %
1502     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1503     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1504     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1505     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1506     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1507     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1508     \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1509     \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1510     \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1511     \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1512     \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1513     \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1514     \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1515     \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1516     \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1517     \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1518     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1519     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1520     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1521     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1522     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1523     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1524     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1525     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1526     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1527     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1528     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1529     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1530     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1531     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1532     \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1533     \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1534   \fi
1535 }

1536 \def\HyPsd@CJKnumber#1{%
1537   \ifnum#1<\z@
1538     \CJK@minus
1539     \expandafter\HyPsd@@@CJKnumber\expandafter{\number-\number#1}%
1540   \else
1541     \expandafter\HyPsd@@@CJKnumber\expandafter{\number#1}%
1542   \fi
1543 }

1544 \def\HyPsd@@@CJKnumber#1{%
1545   \ifcase#1 %
1546     \CJK@zero\or \CJK@one\or \CJK@two\or \CJK@three\or \CJK@four\or
1547     \CJK@five\or \CJK@six\or \CJK@seven\or \CJK@eight\or \CJK@nine\or
1548     \CJK@ten\or \CJK@ten\or \CJK@one\or \CJK@ten\or \CJK@two\or
1549     \CJK@ten\or \CJK@three\or \CJK@ten\or \CJK@four\or \CJK@ten\or \CJK@five\or
1550     \CJK@ten\or \CJK@six\or \CJK@ten\or \CJK@seven\or \CJK@ten\or \CJK@eight\or
1551     \CJK@ten\or \CJK@nine
1552   \else
1553     \ifnum#1<10000 %
1554       \HyPsd@CJKnumberFour#1!\@empty{20}%
1555     \@empty
1556   \else

```

```

1557 \ifnum#1<100000000 %
1558 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1559 \IntCalcDiv#1!10000!%
1560 !#{20}%
1561 \CJK@tenthousand
1562 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1563 \IntCalcMod#1!10000!%
1564 !\CJK@zero{10}%
1565 \@empty
1566 \else
1567 \expandafter\HyPsd@CJKnumberLarge
1568 \number\IntCalcDiv#1!100000000!\expandafter!%
1569 \number\IntCalcMod#1!100000000!!%
1570 \fi
1571 \fi
1572 \fi
1573 }
1574 \def\HyPsd@CJKnumberLarge#1!#2!{%
1575 \HyPsd@CJKnumberFour#1!#{20}%
1576 \CJK@hundredmillion
1577 \ifnum#2=\z@
1578 \else
1579 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1580 \IntCalcDiv#2!10000!%
1581 !\CJK@zero{10}%
1582 \CJK@tenthousand
1583 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1584 \IntCalcMod#2!10000!%
1585 !\CJK@zero{10}%
1586 \@empty
1587 \fi
1588 }
1589 \def\HyPsd@CJKnumberFour#1!#2#3{%
1590 \ifnum#1=\z@
1591 \expandafter\@gobble
1592 \else
1593 \ifnum#1<1000 %
1594 #2%
1595 \HyPsd@CJKnumberThree#1!#{3}%
1596 \else
1597 \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1598 \CJK@thousand
1599 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1600 \IntCalcMod#1!1000!%
1601 !\CJK@zero{10}%
1602 \fi
1603 \fi
1604 }
1605 \def\HyPsd@CJKnumberThree#1!#2#3{%
1606 \ifnum#1=\z@
1607 \else
1608 \ifnum#1<100 %
1609 #2%
1610 \HyPsd@CJKnumberTwo#1!#{3}%
1611 \else
1612 \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1613 \CJK@hundred

```

```

1614 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1615 \IntCalcMod#1!100!%
1616 !\CJK@zero{10}%
1617 \fi
1618 \fi
1619 }
1620 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1621 \ifnum#1=\z@
1622 \else
1623 \ifnum#1<#3 %
1624 #2%
1625 \HyPsd@@CJKnumber{#1}%
1626 \else
1627 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1628 \CJK@ten
1629 \ifnum\IntCalcMod#1!10!=\z@
1630 \else
1631 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1632 \fi
1633 \fi
1634 \fi
1635 }
1636 \def\HyPsd@CJKdigits#1{%
1637 \ifx*#1\relax
1638 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1639 \else
1640 \HyPsd@@CJKdigits\CJK@null{#1}%
1641 \fi
1642 }
1643 \def\HyPsd@@CJKdigits#1#2{%
1644 \ifx\#2\%
1645 \else
1646 \HyPsd@@@CJKdigits#1#2\@nil
1647 \fi
1648 }%
1649 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1650 \HyPsd@CJKdigit#1{#2}%
1651 \ifx\#3\%
1652 \expandafter\@gobble
1653 \else
1654 \expandafter\@firstofone
1655 \fi
1656 {%
1657 \HyPsd@@@CJKdigits#1#3\@nil
1658 }%
1659 }
1660 \def\HyPsd@CJKdigit#1#2{%
1661 \ifcase#2 %
1662 #1\or
1663 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1664 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1665 \fi
1666 }

```


6.5.6 \@inmathwarn-Patch

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

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

```

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

1667 \def\HyPsd@inmathwarn#1#2{%
1668   \ifx#2\expandafter
1669     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1670       \HyPsd@GLYPHERR
1671       \expandafter\@gobble\string#1%
1672     >%
1673     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1674   \else
1675     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1676   \fi
1677 \else
1678   \expandafter#2%
1679 \fi

```

```

1680 }
1681 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1682 \def\HyPsd@EndWithElse#1\else{\else}

```

\HyPsd@add@accent

```

1683 \def\HyPsd@add@accent#1#2{%
1684   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1685   #2%
1686 }%

```

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.

```

1687 \def\HyPsd@LetUnexpandableSpace#1{%
1688   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1689 }

```

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

```

1690 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.8 Marker for commands

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

```

1691 \edef\HyPsd@XSPACE{\string#\string X}
1692 \edef\HyPsd@ITALCORR{\string#\string I}
1693 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 \hspace fix

\HyPsd@hspace

```

1694 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}

```

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

```

1695 \def\HyPsd@@hspace#1*#2\END{%
1696   \ifx\#2\%
1697     \HyPsd@hspacetest{#1}%
1698   \else
1699     \expandafter\HyPsd@hspacetest
1700   \fi
1701 }

```

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

```

1702 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}

```

6.5.10 Fix for AMS classes

```

1703 \ltx@ifundefined{tocsection}{%
1704   \let\HyPsd@AMSclassfix\relax
1705 }{%
1706   \def\HyPsd@AMSclassfix{%
1707     \let\tocpart\HyPsd@tocsection
1708     \let\tocchapter\HyPsd@tocsection
1709     \let\tocappendix\HyPsd@tocsection
1710     \let\tocsection\HyPsd@tocsection
1711     \let\tocsubsection\HyPsd@tocsection
1712     \let\tocsubsubsection\HyPsd@tocsection
1713     \let\tocparagraph\HyPsd@tocsection
1714   }%
1715   \def\HyPsd@tocsection#1#2#3{%
1716     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1717     #3%
1718   }%
1719 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1720 \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.

```

1721 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1722 \def\HyPsd@@ref#1*#2\END{%
1723   \ifx\#2\%
1724     \HyPsd@@@ref{#1}%
1725   \else
1726     \expandafter\HyPsd@@@ref
1727   \fi
1728 }%

```

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

```

1729 \def\HyPsd@@@ref#1{%
1730   \expandafter\ifx\csname r@#1\endcsname\relax
1731     ??%
1732   \else
1733     \expandafter\expandafter\expandafter
1734     \@car\csname r@#1\endcsname\@nil
1735   \fi
1736 }

```

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

```

1737 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1738 \def\HyPsd@@pageref#1*#2\END{%
1739   \ifx\#2\%
1740     \HyPsd@@@pageref{#1}%
1741   \else
1742     \expandafter\HyPsd@@@pageref

```

```

1743 \fi
1744 }

```

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

```

1745 \def\HyPsd@@@pageref#1{%
1746   \expandafter\ifx\csname r@#1\endcsname\relax
1747     ??%
1748   \else
1749     \expandafter\expandafter\expandafter\expandafter
1750     \expandafter\expandafter\expandafter\@car
1751     \expandafter\expandafter\expandafter\@gobble
1752     \csname r@#1\endcsname{}\@nil
1753   \fi
1754 }

```

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

```

1755 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1756 \def\HyPsd@@nameref#1*#2\END{%
1757   \ifx\#2\%
1758     \HyPsd@@@nameref{#1}%
1759   \else
1760     \expandafter\HyPsd@@@nameref
1761   \fi
1762 }

```

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

```

1763 \def\HyPsd@@@nameref#1{%
1764   \expandafter\ifx\csname r@#1\endcsname\relax
1765     ??%
1766   \else
1767     \expandafter\expandafter\expandafter\expandafter
1768     \expandafter\expandafter\expandafter\@car
1769     \expandafter\expandafter\expandafter\@gobbletwo
1770     \csname r@#1\endcsname{}\@nil
1771   \fi
1772 }

```

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

```

1773 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1774 \def\HyPsd@@autoref#1*#2\END{%
1775   \ifx\#2\%
1776     \HyPsd@@@autoref{#1}%
1777   \else
1778     \expandafter\HyPsd@@@autoref
1779   \fi
1780 }

```

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

```

1781 \def\HyPsd@@@autoref#1{%
1782   \expandafter\ifx\csname r@#1\endcsname\relax

```

```

1783   ??%
1784   \else
1785     \expandafter\expandafter\expandafter\HyPsd@autorefname
1786       \csname r@#1\endcsname\}\}\}\}\@nil
1787     \expandafter\expandafter\expandafter
1788       \@car\csname r@#1\endcsname\@nil
1789   \fi
1790 }

```

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

```

1791 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1792   \ifx\#4\%
1793   \else
1794     \HyPsd@@autorefname#4.\@nil
1795   \fi
1796 }

```

`\HyPsd@@autorefname`

```

1797 \def\HyPsd@@autorefname#1.#2\@nil{%
1798   \ltx@ifundefined{#1autorefname}{%
1799     \ltx@ifundefined{#1name}{%
1800     }{%
1801       \csname#1name\endcsname\space
1802     }%
1803   }{%
1804     \csname#1autorefname\endcsname\space
1805   }%
1806 }

```

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

```
\HyPsd@DefCommand
\HyPsd@LetCommand 1807 \begingroup
1808   \def\x#1#2{%
1809     \endgroup
1810     \let#1\def
1811     \def\HyPsd@DefCommand##1##2###{%
1812       #1%
1813       \expandafter\noexpand
1814       \csname\expandafter\@gobble\string##1\@empty\endcsname
1815       \@gobble
1816     }%
1817     \let#2\let
1818     \def\HyPsd@@LetCommand##1{%
1819       \expandafter\ifx\csname##1\expandafter\endcsname
1820         \csname iftrue\endcsname
1821         \pdfstringdefWarn\let
1822         \expandafter\@gobble
1823       \else
1824         \expandafter\ifx\csname##1\expandafter\endcsname
1825           \csname iffalse\endcsname
1826           \pdfstringdefWarn\let
1827           \expandafter\expandafter\expandafter\@gobble
1828         \else
1829           #2%
1830           \expandafter\noexpand
1831           \csname##1\expandafter\expandafter\expandafter\endcsname
1832         \fi
1833       \fi
1834     }%
1835   }%
1836   \expandafter\x\csname <def>-command\expandafter\endcsname
1837     \csname <let>-command\endcsname
1838   \def\HyPsd@LetCommand#1{%
1839     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1840     \expandafter\expandafter\expandafter{%
1841       \expandafter\@gobble\string#1\@empty
1842     }%
1843   }
```

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).

```

1844 \def\HyPsd@ifnextchar#1{%
1845   \pdfstringdefWarn#1%
1846   \expandafter\@gobbletwo\@gobble
1847 }

```

6.5.14 \@protected@testoptifnextchar

`\HyPsd@protected@testopt` Macros with optional arguments doesn't work properly, because they call `\@ifnextchar` to detect the optional argument (see the explanation of `\HyPsd@ifnextchar`). But a warning, that `\@ifnextchar` doesn't work, doesn't help the user very much. Therefore `\@protected@testopt` is also disabled, because its first argument is the problematic macro with the optional argument and it is called before `\@ifnextchar`.

```

1848 \def\HyPsd@protected@testopt#1{%
1849   \pdfstringdefWarn#1%
1850   \@gobbletwo
1851 }

```

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:

```

1852 \def\HyPsd@Warning#1{%
1853   \begingroup
1854   \let\space\ltx@space
1855   \Hy@Warning{#1}%
1856   \endgroup
1857 }

```

6.6.2 Protecting spaces

```

1858 \RequirePackage{etexcmds}[2007/09/09]
1859 \ifetex@unexpanded
1860   \expandafter\@secondoftwo
1861 \else
1862   \expandafter\@firstoftwo
1863 \fi
1864 {%

```

`\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`.

```

1865   \def\HyPsd@ProtectSpaces#1{%
1866     \iftrue
1867       \expandafter\HyPsd@@ProtectSpacesFi
1868       \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1869     \fi
1870   }%

```

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

```

1871   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%

```

```

1872 \fi
1873 \ifx\scrollmode#2\scrollmode
1874 \HyPsd@RemoveMask#1\HyPsd@End#3%
1875 \else
1876 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1877 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1878 \fi
1879 }%

```

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.

```

1880 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1881 \toks@{\expandafter{#1}}%
1882 \xdef#2{\the\toks@}%
1883 }%

1884 }{%
1885 \let\HyPsd@fi\fi
1886 \def\HyPsd@ProtectSpaces#1{%
1887 \xdef#1{%
1888 \iftrue
1889 \expandafter\HyPsd@@ProtectSpacesFi
1890 \expandafter|\expandafter\@empty#1| %
1891 \HyPsd@fi
1892 }%
1893 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1894 }%
1895 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1896 \fi
1897 \etex@unexpanded{#1}%
1898 \ifx\scrollmode#2\scrollmode
1899 \else
1900 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1901 \HyPsd@fi
1902 }%
1903 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1904 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1905 }%
1906 }

```

6.6.3 Remove grouping braces

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

```

1907 \def\HyPsd@RemoveBraces#1{%
1908 \ifx\scrollmode#1\scrollmode
1909 \else
1910 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1911 \fi
1912 }

```

`\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`.

```

1913 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1914   \fi
1915   \def\Hy@temp@A{#1#2}%
1916   \def\Hy@temp@B{#3}%
1917   \ifx\Hy@temp@A\Hy@temp@B
1918     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1919       \HyPsd@String#1%
1920     }%
1921     \ifx\scrollmode#2\scrollmode
1922     \else
1923       \Hy@ReturnAfterFiFiEnd{%
1924         \HyPsd@RemoveBraces{#2}%
1925       }%
1926     \fi
1927   \else
1928     \def\Hy@temp@A{#1}%
1929     \HyPsd@AppendItalcrr\HyPsd@String
1930     \ifx\Hy@temp@A\@empty
1931       \Hy@ReturnAfterElseFiFiEnd{%
1932         \HyPsd@RemoveBraces{#2}%
1933       }%
1934     \else
1935       \HyPsd@ProtectSpaces\Hy@temp@A
1936       \HyPsd@AppendItalcrr\Hy@temp@A
1937       \Hy@ReturnAfterFiFiEnd{%
1938         \expandafter\HyPsd@RemoveBraces\expandafter
1939           {\Hy@temp@A#2}%
1940       }%
1941     \fi
1942   \fi
1943   \Hy@ReturnEnd
1944 }
```

`\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`.

```

1945 \def\HyPsd@AppendItalcrr#1{%
1946   \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1%
1947 }
1948 \def\HyPsd@@AppendItalcrr#1#2{%
1949   \expandafter\def\expandafter#2\expandafter{#2#1}%
1950 }
```

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>.

```

1951 \ltx@ifundefined{directlua}{%
1952 }
```

```

1953 \expandafter\ifx\csname\endcsname\relax\fi
1954 }

```

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.

```

1955 \begingroup
1956 \catcode`\Q=\active
1957 \let Q\ltx@empty
1958 \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1959 \global\let\HyPsd@Rest\relax
1960 \ifcat\relax\noexpand#1\relax
1961 \ifx#1\protect
1962 \else
1963 \ifx#1\penalty
1964 \setbox\z@=\hbox{%
1965 \afterassignment\HyPsd@AfterCountRemove
1966 \count@=#2\HyPsd@End
1967 }%
1968 \else
1969 \ifx#1\kern
1970 \setbox\z@=\hbox{%
1971 \afterassignment\HyPsd@AfterDimenRemove
1972 \dimen@=#2\HyPsd@End
1973 }%
1974 \else
1975 \ifx#1\hskip
1976 \setbox\z@=\hbox{%
1977 \afterassignment\HyPsd@AfterSkipRemove
1978 \skip@=#2\HyPsd@End
1979 }%
1980 \else
1981 \HyPsd@CatcodeWarning{#1}%
1982 \fi
1983 \fi
1984 \fi
1985 \else
1986 \ifcat\noexpand#1\noexpandQ% active character
1987 \expandafter\expandafter\expandafter\def
1988 \expandafter\expandafter\expandafter\HyPsd@String
1989 \expandafter\expandafter\expandafter{%
1990 \expandafter\HyPsd@String\string#1%
1991 }%
1992 }%
1993 \else

```

```

1994 \ifcat#1A% letter
1995 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1996 \HyPsd@String#1%
1997 }%
1998 \else
1999 \ifcat#1 % SPACE
2000 \expandafter\def\expandafter\HyPsd@String\expandafter{%
2001 \HyPsd@String\HyPsd@SPACEOPTI
2002 }%
2003 \else
2004 \ifcat$#1%
2005 \HyPsd@CatcodeWarning{math shift}%
2006 \else
2007 \ifcat&#1%
2008 \HyPsd@CatcodeWarning{alignment tab}%
2009 \else
2010 \ifcat^#1%
2011 \HyPsd@CatcodeWarning{superscript}%
2012 \else
2013 \ifcat_#1%
2014 \HyPsd@CatcodeWarning{subscript}%
2015 \else
2016 \expandafter\def\expandafter\HyPsd@String\expandafter{%
2017 \HyPsd@String#1%
2018 }%
2019 \fi
2020 \fi
2021 \fi
2022 \fi
2023 \fi
2024 \fi
2025 \fi
2026 \fi
2027 \ifx\HyPsd@Rest\relax
2028 \ifx\scrollmode#2\scrollmode
2029 \else
2030 \Hy@ReturnAfterFiFiEnd{%
2031 \HyPsd@CheckCatcodes#2\HyPsd@End
2032 }%
2033 \fi
2034 \else
2035 \ifx\HyPsd@Rest\@empty
2036 \else
2037 \Hy@ReturnAfterFiFiEnd{%
2038 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2039 }%
2040 \fi
2041 \fi
2042 \Hy@ReturnEnd
2043 }%
2044 \endgroup

```

Remove counts, dimens, skips.

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

```

2045 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2046 \gdef\HyPsd@Rest{#1}%

```

2047 }

`\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.

```
2048 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
2049   \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2050     \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2051     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2052   \else
2053     \ifdim\dimen@=\z@
2054     \else
2055       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2056     \fi
2057     \gdef\HyPsd@Rest{#1}%
2058   \fi
2059 }
```

`\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).

```
2060 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
2061   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
2062     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2063     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2064   \else
2065     \ifdim\skip@=\z@
2066     \else
2067       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2068     \fi
2069     \gdef\HyPsd@Rest{#1}%
2070   \fi
2071 }
```

Catcode warnings.

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

```
2072 \def\HyPsd@CatcodeWarning#1{%
2073   \HyPsd@Warning{%
2074     Token not allowed in a PDF string (%
2075     \ifHy@unicode
2076       Unicode%
2077     \else
2078       PDFDocEncoding%
2079     \fi
2080     ):%
2081     \MessageBreak removing `~\HyPsd@RemoveCmdPrefix#1'%
2082   }%
2083 }
2084 \begingroup
2085   \catcode`\|=0 %
2086   \catcode`\|=12 %
2087   \gdef\HyPsd@RemoveCmdPrefix#1{%
2088     \expandafter\HyPsd@@RemoveCmdPrefix
2089     \string#1|@empty\<>-|@empty|@empty
2090   }%
2091   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%

```

2092 |endgroup

\HyPsd@RemoveSpaceWarning

```
2093 \def\HyPsd@RemoveSpaceWarning#1{%
2094   \HyPsd@Warning{%
2095     Token not allowed in a PDF string (%
2096     \ifHy@unicode
2097       Unicode%
2098     \else
2099       PDFDocEncoding%
2100     \fi
2101   ):%
2102   \MessageBreak #1\MessageBreak
2103   removed%
2104 }%
2105 }
```

\HyPsd@ReplaceSpaceWarning

```
2106 \def\HyPsd@ReplaceSpaceWarning#1{%
2107   \HyPsd@Warning{%
2108     Token not allowed in a PDF string (%
2109     \ifHy@unicode
2110       Unicode%
2111     \else
2112       PDFDocEncoding%
2113     \fi
2114   ):%
2115   \MessageBreak #1\MessageBreak
2116   replaced by space%
2117 }%
2118 }
```

6.6.5 Check for wrong glyphs

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

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

```

```

2140 }%
2141 \else
2142 \HyPsd@Warning{%
2143     Composite letter ` \@backslashchar#1+#2'\MessageBreak
2144     not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2145     \MessageBreak
2146     removing ` \@backslashchar#1'%
2147 }%
2148 \fi
2149 }

```

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`.

```

2150 \def\HyPsd@spaceopti#1{ % first space
2151 \ifx\HyPsd@spaceopti#1%
2152 \040%
2153 \else
2154 #1%
2155 \fi
2156 }%

```

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.
2157 \def\HyPsd@Subst#1#2#3{%
2158 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2159 \fi
2160 ##1%
2161 \ifx\scrollmode##2\scrollmode
2162 \else
2163 #2%
2164 \HyPsd@@ReplaceFi##2\END
2165 \fi
2166 }%
2167 \xdef#3{%
2168 \iftrue
2169 \expandafter\HyPsd@@ReplaceFi#3#1\END
2170 \fi
2171 }%
2172 }

```

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

```

2173 \def\HyPsd@StringSubst#1{%
2174 \expandafter\HyPsd@Subst\expandafter{\string#1}%
2175 }

```

`\HyPsd@EscapeTeX`

```
2176 \begingroup
2177 \lccode`!=`\%%
2178 \lccode`|=``\%
2179 \lccode`\(<=`{\%
2180 \lccode`\)=``\}%
2181 \lccode`0=\ltx@zero
2182 \lccode`1=\ltx@zero
2183 \lccode`3=\ltx@zero
2184 \lccode`4=\ltx@zero
2185 \lccode`5=\ltx@zero
2186 \lccode`7=\ltx@zero
2187 \lowercase{\endgroup
2188 \def\HyPsd@EscapeTeX#1{%
2189   \HyPsd@Subst!{|045}#1%
2190   \HyPsd@Subst({|173}#1%
2191   \HyPsd@Subst){|175}#1%
2192 }%
2193 }
```

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.

```
2194 \def\HyPsd@doxspace#1{%
2195   \ifx#1\relax\else
2196     \ifx#1.\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                       \HyPsd@SPACEOPTI
2206                     \fi
2207                   \fi
2208                 \fi
2209               \fi
2210             \fi
2211           \fi
2212         \fi
2213       \fi
2214     \fi
2215   \fi
2216   #1%
2217 }
```

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.

```

2218 \begingroup
2219 \catcode`\|=0 %
2220 \catcode`\|=12 %

```

\HyPsd@ConvertToUnicode

```

2221 |gdef|HyPsd@ConvertToUnicode#1{%
2222 |xdef#1{%
2223 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2224 }%
2225 |ifx#1|@empty
2226 |else
2227 |xdef#1{%
2228 \376\377%
2229 #1%
2230 }%
2231 |fi
2232 }%

```

\HyPsd@DoConvert

```

2233 |gdef|HyPsd@DoConvert#1{%
2234 |ifx#1|@empty
2235 |else
2236 |ltx@ReturnAfterFi{%
2237 |ifx#1\%%
2238 \%%
2239 |expandafter|HyPsd@DoEscape
2240 |else
2241 |HyPsd@Char{#1}%
2242 |expandafter|HyPsd@DoConvert
2243 |fi
2244 }%
2245 |fi
2246 }%

```

\HyPsd@DoEscape

```

2247 |gdef|HyPsd@DoEscape#1{%
2248 |ifx#19%
2249 |expandafter|HyPsd@GetTwoBytes
2250 |else
2251 |ltx@ReturnAfterFi{%
2252 |ifx#18%
2253 00%
2254 |expandafter|HyPsd@GetTwoBytes
2255 |else
2256 #1%
2257 |expandafter|HyPsd@GetOneByte
2258 |fi
2259 }%
2260 |fi
2261 }%

```

\HyPsd@GetTwoBytes

```

2262 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2263 #1\#2#3#4%
2264 |HyPsd@DoConvert
2265 }%

```


\HyPsd@GetOneByte

```
2266 |gdef|HyPsd@GetOneByte#1#2{%  
2267   #1#2%  
2268   |HyPsd@DoConvert  
2269   }%  
2270 |endgroup
```

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

```
2271 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%  
2272   \xdef#4{#4#1#2}%  
2273   \HyPsd@@ConvertToUnicode#3\END#4%  
2274 }
```

\HyPsd@Char

```
2275 \begingroup  
2276   \catcode0=9 %  
2277   \catcode`\^=7 %  
2278   \catcode`\^^=12 %  
2279   \def\x{^^^0000}%  
2280 \expandafter\endgroup  
2281 \ifx\x\@empty  
2282   \def\HyPsd@Char#1{%  
2283     \ifnum`#1<128 %  
2284       \@backslashchar 000#1%  
2285     \else  
2286       \ifnum`#1<65536 %  
2287         \expandafter\HyPsd@CharTwoByte\number`#1!%  
2288       \else  
2289         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate  
2290         \intcalcSub{`#1}{65536}!%  
2291       \fi  
2292     \fi  
2293   }%  
2294   \def\HyPsd@CharTwoByte#1!{%  
2295     \expandafter\expandafter\expandafter\HyPsd@CharOctByte  
2296     \IntCalcDiv#1!256!!%  
2297     \expandafter\expandafter\expandafter\HyPsd@CharOctByte  
2298     \IntCalcMod#1!256!!%  
2299   }%  
2300   \def\HyPsd@CharOctByte#1!{%  
2301     \@backslashchar  
2302     \IntCalcDiv#1!64!%  
2303     \intcalcDiv{\IntCalcMod#1!64!}{8}%  
2304     \IntCalcMod#1!8!%  
2305   }%  
2306   \def\HyPsd@CharSurrogate#1!{%  
2307     \@backslashchar 33%  
2308     \IntCalcDiv#1!262144!%  
2309     \expandafter\expandafter\expandafter\HyPsd@CharOctByte  
2310     \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%  
2311     \@backslashchar 33%  
2312     \expandafter\expandafter\expandafter\IntCalcAdd  
2313     \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%  
2314     \expandafter\expandafter\expandafter\HyPsd@CharOctByte  
2315     \IntCalcMod#1!256!!%  
2316   }%
```

```

2317 \else
2318   \def\HyPsd@Char#1{%
2319     \@backslashchar 000#1%
2320   }%
2321 \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`

```

2322 \begingroup\expandafter\expandafter\expandafter\endgroup
2323 \expandafter\ifx\csname numexpr\endcsname\relax
2324   \let\HyPsd@UTFviii\relax
2325 \else
2326   \begingroup
2327     \lccode\~=\^^f4\relax
2328   \lowercase{\endgroup
2329     \def\HyPsd@UTFviii{%
2330       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2331       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2332       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2333       \ifx~\HyPsd@UTFviii@cccxiv@undef
2334         \let~\HyPsd@UTFviii@cccxiv@def
2335       \fi
2336       \let\unichar\HyPsd@unichar
2337     }%
2338   }%
2339   \def\HyPsd@UTFviii@cccxiv@undef{\@inpenc@undefined@{utf8}}%
2340   \edef\HyPsd@UTFviii@cccxiv@def{%
2341     \noexpand\UTFviii@four@octets\string ~^f4%
2342   }%

```

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

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

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

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

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

$$(5)$$

```

2343 \def\HyPsd@UTFviii@two#1#2{%
2344   \expandafter\HyPsd@UTFviii@@two
2345   \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
2346   \number`#1\expandafter| %
2347   \number\dimexpr.125\dimexpr`#2sp\expandafter\relax\expandafter| %
2348   \number`#2 \@nil

```

```

2349 }%
2350 \def\HyPsd@UTFviii@@two#1|#2|#3|#4@nil{%
2351 \expandafter\8%
2352 \number\numexpr #1-48\expandafter\relax
2353 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2354 \number\numexpr #3-8*%
2355 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2356 \number\numexpr #4-8*#3\relax
2357 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2358 \def\HyPsd@UTFviii@three#1#2#3{%
2359 \expandafter\HyPsd@UTFviii@@three
2360 \number\dimexpr.25\dimexpr`#1sp\expandafter\relax\expandafter| %
2361 \number`#1\expandafter| %
2362 \number\ifnum\numexpr`#2-128\relax <32 0\else 1\fi\expandafter| %
2363 \number\dimexpr.25\dimexpr`#2sp\expandafter\relax\expandafter| %
2364 \number`#2\expandafter| %
2365 \number\dimexpr.125\dimexpr`#3sp\expandafter\relax\expandafter| %
2366 \number`#3 \@nil
2367 }%
2368 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7@nil{%
2369 \expandafter\9%
2370 \number\numexpr #1-56\expandafter\relax
2371 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2372 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2373 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2374 \number\numexpr #6-16\expandafter\relax
2375 \number\numexpr #7-8*#6\relax
2376 }%

```

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 wwzzzyy 110111yy yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

2377 \def\HyPsd@UTFviii@four#1#2{%
2378 \expandafter\HyPsd@@UTFviii@four\number
2379 \numexpr-1+(`#1-240)*4+\dimexpr.0625\dimexpr`#2sp-128sp%
2380 \expandafter|\number
2381 \numexpr`#2-16*\dimexpr.0625\dimexpr`#2sp| %
2382 }%
2383 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2384 \933\number\dimexpr.25\dimexpr#1sp\relax\relax

```

```

2385 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2386 \ifodd#2 %
2387 \number\numexpr(#2-1)/2\relax
2388 \else
2389 \number\numexpr#2/2\relax
2390 \fi
2391 \number\numexpr\ifodd#2 4+\fi
2392 \dimexpr.0625\dimexpr`#3sp-128sp\relax\relax\relax
2393 \933%
2394 \expandafter\HyPsd@@@UTFviii@four\number
2395 \numexpr`#3-16*\dimexpr.0625\dimexpr`#3sp| %
2396 }%
2397 \def\HyPsd@@@UTFviii@four#1|#2{%
2398 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2399 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2400 \number\dimexpr.125\dimexpr`#2sp-128sp\relax\relax
2401 \number\numexpr`#2-8*\dimexpr.125\dimexpr`#2sp\relax\relax\relax
2402 }%

```

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

```

2403 \def\HyPsd@unichar#1{%
2404 \ifHy@unicode
2405 \ifnum#1>"10FFFF %
2406 \HyPsd@UnicodeReplacementCharacter % illegal
2407 \else
2408 \ifnum#1>"FFFF %

```

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

```

2409 \expandafter\HyPsd@unichar\expandafter{%
2410 \number\numexpr 55296+%
2411 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2412 \relax\relax\relax
2413 }%

```

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

```

2414 \expandafter\HyPsd@unichar\expandafter{%
2415 \number\numexpr#1-9216%
2416 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2417 \relax\relax\relax
2418 }%
2419 \else
2420 \ifnum#1>"7FFF %
2421 \9%
2422 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2423 \number
2424 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2425 }%
2426 \else
2427 \8%
2428 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2429 \fi
2430 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2431 \number
2432 \numexpr#1-256*\number
2433 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2434 }%
2435 \fi

```

```

2436 \fi
2437 \else
2438 .% unsupported (Unicode -> PDF Doc Encoding)
2439 \fi
2440 }%
2441 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2442 \def\HyPsd@unichar@first@byte#1{%
2443 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2444 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2445 \number
2446 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2447 \relax\relax\relax
2448 }%
2449 }%
2450 \def\HyPsd@unichar@second@byte#1{%
2451 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2452 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2453 \number
2454 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2455 \relax\relax\relax
2456 }%
2457 }%
2458 \def\HyPsd@unichar@octtwo#1{%
2459 \number\dimexpr.125\dimexpr#1sp\relax\relax
2460 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2461 \relax\relax\relax
2462 }%
2463 \fi

```

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

```

2464 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2465 \ifx\@gobble#1%
2466 \else
2467 [Please insert \textbackslash PrerenderUnicode%
2468 \textbraceleft#1\textbraceright\space
2469 into preamble]%
2470 \fi
2471 }%

```

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.

```

2472 \def\HyPsd@DieFace#1{%
2473 \ifHy@unicode
2474 \ifnum#1<1 %
2475 \HyPsd@UnicodeReplacementCharacter
2476 \else
2477 \ifnum#1>6 %

```

```

2478     \9046\205%
2479     \expandafter\expandafter\expandafter
2480     \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2481     \else
2482     \9046\20\intcalcDec{#1}%
2483     \fi
2484     \fi
2485     \else
2486     .% Die faces are not part of PDFDocEncoding
2487     \fi
2488 }

```

\HyPsd@DieFaceLarge

```

2489 \def\HyPsd@DieFaceLarge#1{%
2490   \ifnum#1>6 %
2491     \expandafter\ltx@firstoftwo
2492   \else
2493     \expandafter\ltx@secondoftwo
2494   \fi
2495   {%
2496     \9046\205%
2497     \expandafter\expandafter\expandafter
2498     \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2499   }{%
2500     \9046\20\IntCalcDec#1!%
2501   }%
2502 }

```

6.6.11 Support for moon phases of package china2e

```

2503 \def\HyPsd@MoonPha#1{%
2504   \ifcase\intcalcNum{#1} %
2505     \HyPsd@UnicodeReplacementCharacter
2506   \or % 1
2507   % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2508   \9330\074\9337\032%
2509   \or % 2
2510   \HyPsd@UnicodeReplacementCharacter
2511   \or % 3
2512   % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2513   \9330\074\9337\035%
2514   \or % 4
2515   % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2516   \9330\074\9337\034%
2517   \else
2518     \HyPsd@UnicodeReplacementCharacter
2519   \fi
2520 }
2521 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2522 \def\HyPsd@ding#1{%
2523   \ifHy@unicode
2524     \ifnum#1<32 %
2525       \HyPsd@UnicodeReplacementCharacter
2526     \else

```

```

2527 \ifnum#1>254 %
2528 \HyPsd@UnicodeReplacementCharacter
2529 \else
2530 \ifnum#1<127 %
2531 \expandafter\expandafter\expandafter
2532 \HyPsd@@ding\intcalcNum{#1}!%
2533 \else
2534 \ifnum#1>160 %
2535 \expandafter\expandafter\expandafter
2536 \HyPsd@@ding\intcalcNum{#1}!%
2537 \else
2538 \HyPsd@UnicodeReplacementCharacter
2539 \fi
2540 \fi
2541 \fi
2542 \fi
2543 \else
2544 .% Dingbats are not part of PDFDocEncoding
2545 \fi
2546 }

```

\HyPsd@@ding

```

2547 \def\HyPsd@@ding#1!{%
2548 \ltx@ifundefined{HyPsd@ding@#1}{%
2549 \ifnum#1<127 %
2550 \9047%
2551 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2552 \else
2553 \ifnum#1<168 %
2554 \9047\14\IntCalcSub#1!160!%
2555 \else
2556 \ifnum#1>181 %
2557 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2558 \else
2559 % 172..181 -> U+2460..U+2469
2560 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2561 \fi
2562 \fi
2563 \fi
2564 }{%
2565 \csname HyPsd@ding@#1\endcsname
2566 }%
2567 }

2568 \@namedef{HyPsd@ding@32}{\space}
2569 % U+260E BLACK TELEPHONE
2570 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2571 % U+261B BLACK RIGHT POINTING INDEX
2572 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2573 % U+261E WHITE RIGHT POINTING INDEX
2574 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2575 % U+2605 BLACK STAR
2576 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2577 % U+25CF BLACK CIRCLE
2578 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2579 % U+25A0 BLACK SQUARE
2580 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2581 % U+25B2 BLACK UP-POINTING TRIANGLE

```

```

2582 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2583 % U+25BC BLACK DOWN-POINTING TRIANGLE
2584 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2585 % U+25C6 BLACK DIAMOND
2586 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2587 % U+25D7 RIGHT HALF BLACK CIRCLE
2588 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2589 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2590 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2591 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2592 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2593 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2594 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2595 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2596 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2597 \@ifclassloaded{memoir}{%
2598   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2599 }{}

```

7.2 Package subfigure

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

```

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

```



```

2630 \providecommand*{\toclevel@subtable}{1}%
2631 }%
2632 }%
2633 }{}

```

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:

```

2634 \ltx@ifundefined{XR@addURL}{%
2635 }{%

```

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.

```

2636 \def\xr@addURL#1{\xr@dURL#1{}{}{}{}\\}%
2637 \def\xr@dURL#1#2#3#4#5\{%
2638   {#1}{#2}%
2639   \if!#4!%
2640   \else
2641     {#3}{#4}{\xr@URL}%
2642   \fi
2643 }%
2644 }

2645 \def\Hy@true{true}
2646 \def\Hy@false{false}

```

Providing dummy definitions.

```

2647 \let\literalps@out\@gobble
2648 \newcommand\pdfbookmark[3]{}{}
2649 \def\Acrobatmenu#1#2{\leavevmode#2}
2650 \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

```

2651 \let\HyperRaiseLinkHook\@empty
2652 \def\HyperRaiseLinkDefault{\baselineskip}

```

\HyperRaiseLinkHook allows the user to reassign \HyperRaiseLinkLength.

```

2653 \newcount\Hy@SavedSpaceFactor
2654 \def\Hy@SaveSpaceFactor{%
2655   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@ \fi
2656 }
2657 \def\Hy@RestoreSpaceFactor{%

```

```

2658 \relax
2659 \ifhmode
2660   \ifnum\Hy@SavedSpaceFactor>\z@
2661     \spacefactor=\Hy@SavedSpaceFactor
2662   \fi
2663 \fi
2664 }
2665 \def\Hy@SaveSavedSpaceFactor{%
2666   \edef\Hy@RestoreSavedSpaceFactor{%
2667     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2668   }%
2669 }
2670 \def\Hy@raisedlink#1{%
2671   \ifvmode
2672     #1%
2673   \else
2674     \Hy@SaveSpaceFactor
2675     \penalty\@M
2676     \smash{%
2677       \begingroup
2678         \let\HyperRaiseLinkLength\@tempdima
2679         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2680         \HyperRaiseLinkHook
2681       \expandafter\endgroup
2682       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2683         \Hy@RestoreSpaceFactor
2684         #1%
2685         \Hy@SaveSpaceFactor
2686       }%
2687     }%
2688     \Hy@RestoreSpaceFactor
2689   \fi
2690 }

```

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

```

2691 \def\Hy@SaveLastskip{%
2692   \let\Hy@RestoreLastskip\relax
2693   \ifvmode
2694     \ifdim\lastskip=\z@
2695       \let\Hy@RestoreLastskip\nobreak
2696     \else
2697       \begingroup
2698         \skip@=-\lastskip
2699         \edef\x{%
2700           \endgroup
2701           \def\noexpand\Hy@RestoreLastskip{%
2702             \noexpand\ifvmode
2703               \noexpand\nobreak
2704               \vskip\the\skip@
2705               \vskip\the\lastskip\relax
2706             \noexpand\fi
2707           }%
2708         }%
2709       \x
2710     \fi
2711   \else
2712     \ifhmode

```

```

2713 \ifdim\lastskip=\z@
2714 \let\Hy@RestoreLastskip\nobreak
2715 \else
2716 \begingroup
2717 \skip@=-\lastskip
2718 \edef\x{%
2719 \endgroup
2720 \def\noexpand\Hy@RestoreLastskip{%
2721 \noexpand\ifhmode
2722 \noexpand\nobreak
2723 \hskip\the\skip@
2724 \hskip\the\lastskip\relax
2725 \noexpand\fi
2726 }%
2727 }%
2728 \x
2729 \fi
2730 \fi
2731 \fi
2732 }%

```

9 Options

```

2733 \SetupKeyvalOptions{%
2734 family=Hyp,%
2735 prefix=HyOpt%
2736 }

```

9.1 Help macros

\IfHyperBooleanExists

```

2737 \def\IfHyperBooleanExists#1{%
2738 \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2739 \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2740 }%
2741 }

2742 \@namedef{KV@Hyp@stoppeardearly@default}{ }

```

\IfHyperBoolean

```

2743 \def\IfHyperBoolean#1{%
2744 \IfHyperBooleanExists{#1}{%
2745 \csname ifHy@#1\endcsname
2746 \expandafter\ltx@firstoftwo
2747 \else
2748 \expandafter\ltx@secondoftwo
2749 \fi
2750 }\ltx@secondoftwo
2751 }

```

\Hy@boolkey

```

2752 \def\Hy@boolkey#1#2{%
2753 \edef\Hy@tempa{#2}%
2754 \lowercase\expandafter{%
2755 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2756 }%
2757 \ifx\Hy@tempa\@empty

```

```

2758 \let\Hy@tempa\Hy@true
2759 \fi
2760 \ifx\Hy@tempa\Hy@true
2761 \else
2762 \ifx\Hy@tempa\Hy@false
2763 \else
2764 \let\Hy@tempa\relax
2765 \fi
2766 \fi
2767 \ifx\Hy@tempa\relax
2768 \Hy@WarnOptionValue{#2}{#1}{`true' or `false'}}%
2769 \else
2770 \Hy@Info{Option `#1' set `\'Hy@tempa'}}%
2771 \csname Hy@#1\Hy@tempa\endcsname
2772 \fi
2773 }

```

\Hy@WarnOptionValue

```

2774 \def\Hy@WarnOptionValue#1#2#3{%
2775 \Hy@Warning{%
2776 Unexpected value `#1'\MessageBreak
2777 of option `#2' instead of\MessageBreak
2778 #3%
2779 }%
2780 }

```

\Hy@DisableOption

```

2781 \def\Hy@DisableOption#1{%
2782 \ltx@ifundefined{KV@Hyp@#1@default}{%
2783 \define@key{Hyp}{#1}%
2784 }{%
2785 \define@key{Hyp}{#1}[]%
2786 }%
2787 {\Hy@WarnOptionDisabled{#1}}}%
2788 }

```

\Hy@WarnOptionDisabled

```

2789 \def\Hy@WarnOptionDisabled#1{%
2790 \Hy@Warning{%
2791 Option `#1' has already been used,\MessageBreak
2792 setting the option has no effect%
2793 }%
2794 }

```

\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.

```

2795 \def\Hy@CheckOptionValue#1#2#3{%
2796 \begingroup
2797 \edef\x{#1}%
2798 \@onelevel@sanitize\x
2799 \let\y=y%
2800 \def\do##1##2{%
2801 \def\z{##1}%
2802 \@onelevel@sanitize\z
2803 \ifx\x\z
2804 \let\y=n%

```

```

2805     \let\do\@gobbletwo
2806     \fi
2807   }%
2808   #3%
2809   \ifx\y y%
2810     \def\do##1##2{%
2811       * `##1'%
2812       \ifx\\##2\\\else\space(##2)\fi
2813       \MessageBreak
2814     }%
2815     \Hy@Warning{%
2816       Values of option `##2':\MessageBreak
2817       #3%
2818       * An empty value disables the option.\MessageBreak
2819       Unknown value `x'%
2820     }%
2821   \fi
2822 \endgroup
2823 }

```

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

```

2824 \def\Hy@DefNameKey#1{%
2825   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2826 }

```

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

```

2827 \def\Hy@@DefNameKey#1#2#3{%
2828   \define@key{Hyp}{#2}{%
2829     \edef#1{##1}%
2830     \ifx#1\@empty
2831       \else
2832         \Hy@CheckOptionValue{##1}{#2}{#3}%
2833       \fi
2834     }%
2835     \let#1\@empty
2836 }

```

`\Hy@UseNameKey`

```

2837 \def\Hy@UseNameKey#1#2{%
2838   \ifx#2\@empty
2839     \else
2840       /#1/#2%
2841     \fi
2842 }

```

9.2 Defining the options

```

2843 \define@key{Hyp}{implicit}[true]{%
2844   \Hy@boolkey{implicit}{#1}%
2845 }
2846 \define@key{Hyp}{draft}[true]{%
2847   \Hy@boolkey{draft}{#1}%
2848 }

```

```

2849 \define@key{Hyp}{final}[true]{%
2850   \Hy@boolkey{final}{#1}%
2851 }
2852 \let\KV@Hyp@nolinks\KV@Hyp@draft
2853 \def\Hy@ObsoletePaperOption#1{%
2854   \Hy@WarningNoLine{%
2855     Option `#1' is no longer used%
2856   }%
2857   \define@key{Hyp}{#1}[true]{}%
2858 }
2859 \def\Hy@temp#1{%
2860   \define@key{Hyp}{#1}[true]{%
2861     \Hy@ObsoletePaperOption{#1}%
2862   }%
2863 }
2864 \Hy@temp{a4paper}
2865 \Hy@temp{a5paper}
2866 \Hy@temp{b5paper}
2867 \Hy@temp{letterpaper}
2868 \Hy@temp{legalpaper}
2869 \Hy@temp{executivepaper}
2870 \define@key{Hyp}{setpagesize}[true]{%
2871   \Hy@boolkey{setpagesize}{#1}%
2872 }
2873 \define@key{Hyp}{debug}[true]{%
2874   \Hy@boolkey{debug}{#1}%
2875 }
2876 \define@key{Hyp}{linktocpage}[true]{%
2877   \Hy@boolkey{linktocpage}{#1}%
2878   \ifHy@linktocpage
2879     \let\Hy@linktoc\Hy@linktoc@page
2880   \else
2881     \let\Hy@linktoc\Hy@linktoc@section
2882   \fi
2883 }
2884 \chardef\Hy@linktoc@none=0 %
2885 \chardef\Hy@linktoc@section=1 %
2886 \chardef\Hy@linktoc@page=2 %
2887 \chardef\Hy@linktoc@all=3 %
2888 \ifHy@linktocpage
2889   \let\Hy@linktoc\Hy@linktoc@page
2890 \else
2891   \let\Hy@linktoc\Hy@linktoc@section
2892 \fi
2893 \define@key{Hyp}{linktoc}{%
2894   \@ifundefined{Hy@linktoc@#1}{%
2895     \Hy@Warning{%
2896       Unexpected value `#1' of\MessageBreak
2897       option `linktoc' instead of `none',\MessageBreak
2898       `section', `page' or `all'%
2899     }%
2900   }{%
2901     \expandafter\let\expandafter\Hy@linktoc
2902       \csname Hy@linktoc@#1\endcsname
2903   }%
2904 }
2905 \define@key{Hyp}{extension}{\def\XR@ext{#1}}

```

```

2906 \let\XR@ext\relax
2907 \define@key{Hyp}{verbose}[true]{%
2908   \Hy@boolkey{verbose}{#1}%
2909 }
2910 \define@key{Hyp}{typexml}[true]{%
2911   \Hy@boolkey{typexml}{#1}%
2912 }

```

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.

```

2913 \define@key{Hyp}{raiselinks}[true]{%
2914   \Hy@boolkey{raiselinks}{#1}%
2915 }

```

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

```

2916 \def\Hy@setbreaklinks#1{%
2917   \csname breaklinks#1\endcsname
2918 }

2919 \def\Hy@breaklinks@unsupported{%
2920   \ifx\Hy@setbreaklinks\@gobble
2921     \ifHy@breaklinks
2922       \Hy@WarningNoLine{%
2923         You have enabled option `breaklinks'.\MessageBreak
2924         But driver `\'Hy@driver.def' does not support this.\MessageBreak
2925         Expect trouble with the link areas of broken links%
2926       }%
2927     \fi
2928   \fi
2929 }

2930 \define@key{Hyp}{breaklinks}[true]{%
2931   \Hy@boolkey{breaklinks}{#1}%
2932   \let\Hy@setbreaklinks\@gobble
2933 }

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

```

Determines whether an automatic anchor is put on each page

```

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

```

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.

```

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

```

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

```

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

```

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

```

2946 \define@key{Hyp}{hypertextnames}[true]{%

```

```

2947 \Hy@boolkey{hypertexnames}{#1}%
2948 }

```

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

```

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

2952 \define@key{Hyp}{destlabel}[true]{%
2953 \Hy@boolkey{destlabel}{#1}%
2954 }

2955 \define@key{Hyp}{unicode}[true]{%
2956 \Hy@boolkey{unicode}{#1}%
2957 \ifHy@unicode
2958 \def\HyPsd@pdfencoding{unicode}%
2959 \HyPsd@LoadUnicode
2960 \else
2961 \def\HyPsd@pdfencoding{pdfdoc}%
2962 \fi
2963 }

2964 \Hy@AtBeginDocument{%
2965 \ifx\HyPsd@LoadUnicode\relax
2966 \else
2967 \def\HyPsd@LoadUnicode{%
2968 \Hy@Error{%
2969 Unicode support for bookmarks is not available.\MessageBreak
2970 Activate unicode support by using one of the options\MessageBreak
2971 `unicode', `pdfencoding=unicode', `pdfencoding=auto'\MessageBreak
2972 in the preamble%
2973 } \@ehc
2974 \global\let\HyPsd@LoadUnicode\relax
2975 \global\Hy@unicodetrue
2976 \global\let\Hy@unicodetrue\Hy@unicodetrue
2977 }%
2978 \fi
2979 }

2980 \define@key{Hyp}{pdfencoding}{%
2981 \edef\HyPsd@temp{#1}%
2982 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2983 \let\HyPsd@pdfencoding\HyPsd@temp
2984 \Hy@unicodetrue
2985 \else
2986 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2987 \z@
2988 \else
2989 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2990 \z@
2991 \else
2992 \@ne
2993 \fi
2994 \fi
2995 \let\HyPsd@pdfencoding\HyPsd@temp
2996 \hypersetup{unicode}%
2997 \ifHy@unicode
2998 \def\HyPsd@pdfencoding{#1}%
2999 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
3000 \HyPsd@LoadStringEnc

```



```

3001     \fi
3002   \else
3003     \Hy@Warning{Cannot switch to unicode bookmarks}%
3004     \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3005   \fi
3006   \else
3007     \@onelevel@sanitize\HyPsd@temp
3008     \Hy@Warning{%
3009       Values of option `pdfencoding':\MessageBreak
3010       `pdfdoc', `unicode', `auto'.\MessageBreak
3011       Ignoring unknown value `\HyPsd@temp'%
3012     }%
3013   \fi
3014 \fi
3015 }
3016 \def\HyPsd@pdfencoding@auto{auto}
3017 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3018 \def\HyPsd@pdfencoding@unicode{unicode}
3019 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3020 \def\HyPsd@LoadStringEnc{%
3021   \RequirePackage{stringenc}[2009/12/15]%
3022   \let\HyPsd@LoadStringEnc\relax
3023 }
3024 \Hy@AtBeginDocument{%
3025   \@ifpackageloaded{stringenc}{%
3026     \let\HyPsd@LoadStringEnc\relax
3027   }{%
3028     \def\HyPsd@LoadStringEnc{%
3029       \Hy@WarningNoLine{%
3030         Missing package `stringenc'. Use `pdfencoding=auto'\MessageBreak
3031         in the preamble or load the package there%
3032       }%
3033     }%
3034   }%
3035 }
3036 \define@key{Hyp}{psdextra}[true]{%
3037   \Hy@boolkey{psdextra}{#1}%
3038   \HyPsd@LoadExtra
3039 }
3040 \def\hypersetup{\kvsetkeys{Hyp}}
3041 \newif\ifHy@setpdfversion
3042 \define@key{Hyp}{pdfversion}{%
3043   \@ifundefined{Hy@pdfversion@#1}{%
3044     \PackageWarning{hyperref}{%
3045       Unsupported PDF version `#1'.\MessageBreak
3046       Valid values: 1.2 until 1.9%
3047     }%
3048   }{%
3049     \Hy@setpdfversiontrue
3050     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3051   }%
3052 }
3053 \@namedef{Hy@pdfversion@1.2}{2}%
3054 \@namedef{Hy@pdfversion@1.3}{3}%
3055 \@namedef{Hy@pdfversion@1.4}{4}%
3056 \@namedef{Hy@pdfversion@1.5}{5}%

```

```

3057 \@namedef{Hy@pdfversion@1.6}{6}%
3058 \@namedef{Hy@pdfversion@1.7}{7}%
3059 \@namedef{Hy@pdfversion@1.8}{8}%
3060 \@namedef{Hy@pdfversion@1.9}{9}%
3061 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

3062 \newif\ifHy@DviMode
3063 \let\Hy@DviErrMsg\ltx@empty
3064 \ifpdf
3065   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3066 \else
3067   \ifxetex
3068     \def\Hy@DviErrMsg{XeTeX is running}%
3069   \else
3070     \ifvtex
3071       \ifvtexdvi
3072         \Hy@DviModetrue
3073       \else
3074         \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3075       \fi
3076     \else
3077       \Hy@DviModetrue
3078     \fi
3079   \fi
3080 \fi
3081 \def\HyOpt@CheckDvi#1{%
3082   \ifHy@DviMode
3083     \expandafter\ltx@firstofone
3084   \else
3085     \Hy@Error{%
3086       Wrong DVI mode driver option `#1',\MessageBreak
3087       because \Hy@DviErrMsg
3088     }\@ehc
3089     \expandafter\ltx@gobble
3090   \fi
3091 }
3092 \DeclareVoidOption{tex4ht}{%
3093   \Hy@texhttrue
3094   \kvsetkeys{Hyp}{colorlinks=true}%
3095   \def\BeforeTeXIVht{\RequirePackage{color}}%
3096   \def\Hy@driver{htex4ht}%
3097   \def\MaybeStopEarly{%
3098     \Hy@Message{Stopped early}%
3099     \Hy@AtBeginDocument{%
3100       \PDF@FinishDoc
3101       \gdef\PDF@FinishDoc{}%
3102     }%
3103   \endinput
3104 }%
3105 }
3106 \DeclareVoidOption{pdftex}{%
3107   \ifpdf
3108     \def\Hy@driver{hpdftex}%
3109     \PassOptionsToPackage{pdftex}{color}%
3110   \else

```

```

3111 \Hy@Error{%
3112   Wrong driver option `pdfTeX',\MessageBreak
3113   because pdfTeX in PDF mode is not detected%
3114 } \@ehc
3115 \fi
3116 }
3117 \DeclareVoidOption{luatex}{%
3118 \ifpdf
3119   \ifx\pdfextension\@undefined
3120     \def\Hy@driver{hpdfTeX}%
3121     \PassOptionsToPackage{pdfTeX}{color}%
3122   \else
3123     \def\Hy@driver{hluatex}%
3124     \PassOptionsToPackage{luatex}{color}%
3125   \fi
3126 \else
3127   \Hy@Error{%
3128     Wrong driver option `luatex',\MessageBreak
3129     because luaTeX in PDF mode is not detected%
3130   } \@ehc
3131 \fi
3132 }
3133 \DeclareVoidOption{nativepdf}{%
3134 \HyOpt@CheckDvi{nativepdf}{%
3135   \def\Hy@driver{hdvips}%
3136   \PassOptionsToPackage{dvips}{color}%
3137 }%
3138 }
3139 \DeclareVoidOption{dvipdfm}{%
3140 \HyOpt@CheckDvi{dvipdfm}{%
3141   \def\Hy@driver{hdvipdfm}%
3142 }%
3143 }
3144 \DeclareVoidOption{dvipdfmx}{%
3145 \HyOpt@CheckDvi{dvipdfmx}{%
3146   \def\Hy@driver{hdvipdfm}%
3147   \PassOptionsToPackage{dvipdfmx}{color}%
3148 }%
3149 }
3150 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3151 \expandafter\ifx\csname if#1\expandafter\endcsname
3152   \csname iftrue\endcsname
3153   \chardef\SpecialDvipdfmxOutlineOpen\@ne
3154 \else
3155   \chardef\SpecialDvipdfmxOutlineOpen\z@
3156 \fi
3157 }
3158 \DeclareVoidOption{xetex}{%
3159 \ifxetex
3160   \def\Hy@driver{hxetex}%
3161 \else
3162   \Hy@Error{%
3163     Wrong driver option `xetex',\MessageBreak
3164     because XeTeX is not detected%
3165   } \@ehc
3166 \fi
3167 }

```

```

3168 \DeclareVoidOption{pdfmark}{%
3169   \HyOpt@CheckDvi{pdfmark}{%
3170     \def\Hy@driver{hdvips}%
3171   }%
3172 }
3173 \DeclareVoidOption{dvips}{%
3174   \HyOpt@CheckDvi{dvips}{%
3175     \def\Hy@driver{hdvips}%
3176     \PassOptionsToPackage{dvips}{color}%
3177   }%
3178 }
3179 \DeclareVoidOption{hypertex}{%
3180   \HyOpt@CheckDvi{hypertex}{%
3181     \def\Hy@driver{hypertex}%
3182   }%
3183 }
3184 \let\Hy@MaybeStopNow\relax
3185 \DeclareVoidOption{vtex}{%
3186   \ifvtex
3187     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3188     \def\Hy@driver{hvtex}%
3189   \else
3190     \ifnum\OpMode=10\relax
3191     \def\Hy@driver{hvtexhtm}%
3192     \def\MaybeStopEarly{%
3193       \Hy@Message{Stopped early}%
3194       \Hy@AtBeginDocument{%
3195         \PDF@FinishDoc
3196         \gdef\PDF@FinishDoc{}%
3197       }%
3198       \endinput
3199     }%
3200   \else
3201     \Hy@Error{%
3202       Wrong driver option `vtex',\MessageBreak
3203       because of wrong OpMode (\the\OpMode)%
3204     }\@ehc
3205   \fi
3206 \fi
3207 \else
3208   \Hy@Error{%
3209     Wrong driver option `vtex',\MessageBreak
3210     because VTeX is not running%
3211   }\@ehc
3212 \fi
3213 }
3214 \DeclareVoidOption{vtexpdfmark}{%
3215   \ifvtex
3216     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3217     \def\Hy@driver{hvtexmrk}%
3218   \else
3219     \Hy@Error{%
3220       Wrong driver option `vtexpdfmark',\MessageBreak
3221       because of wrong OpMode (\the\OpMode)%
3222     }\@ehc
3223   \fi
3224 \else

```

```

3225 \Hy@Error{%
3226   Wrong driver option `vtexpdfmark,\MessageBreak
3227   because VTeX is not running%
3228 } \@ehc
3229 \fi
3230 }
3231 \DeclareVoidOption{dviwindo}{%
3232 \HyOpt@CheckDvi{dviwindo}{%
3233   \def\Hy@driver{hdviwind}%
3234   \kvsetkeys{Hyp}{colorlinks}%
3235   \PassOptionsToPackage{dviwindo}{color}%
3236 }%
3237 }
3238 \DeclareVoidOption{dvipsone}{%
3239 \HyOpt@CheckDvi{dvipsone}{%
3240   \def\Hy@driver{hdvipson}%
3241   \PassOptionsToPackage{dvipsone}{color}%
3242 }%
3243 }
3244 \DeclareVoidOption{textures}{%
3245 \HyOpt@CheckDvi{textures}{%
3246   \def\Hy@driver{htexture}%
3247 }%
3248 }
3249 \DeclareVoidOption{latex2html}{%
3250 \HyOpt@CheckDvi{latex2html}{%
3251   \Hy@AtBeginDocument{\@latex2htmlX}%
3252 }%
3253 }

```

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

```

3254 \DeclareVoidOption{ps2pdf}{%
3255 \HyOpt@CheckDvi{ps2pdf}{%
3256   \def\Hy@driver{hdvips}%
3257   \PassOptionsToPackage{dvips}{color}%
3258 }%
3259 }
3260 \let\HyOpt@DriverFallback\ltx@empty
3261 \define@key{Hyp}{driverfallback}{%
3262 \ifHy@DviMode
3263   \def\HyOpt@DriverFallback{#1}%
3264   \Hy@Match\HyOpt@DriverFallback{}{%
3265     ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3266     latex2html|tex4ht)$%
3267   }{}{%
3268     \Hy@Warning{%
3269       Invalid driver `#1' for option\MessageBreak
3270       `driverfallback'%
3271     }%
3272     \let\HyOpt@DriverFallback\ltx@empty
3273   }%
3274 \fi
3275 }
3276 \let\HyOpt@CustomDriver\ltx@empty
3277 \define@key{Hyp}{customdriver}{%
3278 \IfFileExists{#1.def}{%
3279   \def\HyOpt@CustomDriver{#1}%

```

```

3280 }{%
3281   \Hy@Warning{%
3282     Missing driver file `#1.def',\MessageBreak
3283     ignoring custom driver%
3284   }%
3285 }%
3286 }

```

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.

```

3287 \define@key{Hyp}{hyperfigures}[true]{%
3288   \Hy@boolkey{hyperfigures}{#1}%
3289 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

3290 \define@key{Hyp}{hyperfootnotes}[true]{%
3291   \Hy@boolkey{hyperfootnotes}{#1}%
3292 }

```

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

```

3293 \def\back@none{none}
3294 \def\back@section{section}
3295 \def\back@page{page}
3296 \def\back@slide{slide}
3297 \define@key{Hyp}{backref}[section]{%
3298   \lowercase{\def\Hy@tempa{#1}}%
3299   \ifx\Hy@tempa\@empty
3300     \let\Hy@tempa\back@section
3301   \fi
3302   \ifx\Hy@tempa\Hy@false
3303     \let\Hy@tempa\back@none
3304   \fi
3305   \ifx\Hy@tempa\back@slide
3306     \let\Hy@tempa\back@section
3307   \fi
3308   \ifx\Hy@tempa\back@page
3309     \PassOptionsToPackage{hyperpageref}{backref}%
3310     \Hy@backreftrue
3311   \else
3312     \ifx\Hy@tempa\back@section
3313       \PassOptionsToPackage{hyperref}{backref}%
3314       \Hy@backreftrue
3315     \else
3316       \ifx\Hy@tempa\back@none
3317         \Hy@backreffalse
3318       \else
3319         \Hy@WarnOptionValue{#1}{backref}{%
3320           `section', `slide', `page', `none',\MessageBreak
3321           or `false'}%
3322       \fi
3323     \fi
3324   \fi
3325 }
3326 \define@key{Hyp}{pagebackref}[true]{%
3327   \edef\Hy@tempa{#1}%
3328   \lowercase\expandafter{%

```

```

3329 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3330 }%
3331 \ifx\Hy@tempa\@empty
3332 \let\Hy@tempa\Hy@true
3333 \fi
3334 \ifx\Hy@tempa\Hy@true
3335 \PassOptionsToPackage{hyperpageref}{backref}%
3336 \Hy@backreftrue
3337 \else
3338 \ifx\Hy@tempa\Hy@false
3339 \Hy@backreffalse
3340 \else
3341 \Hy@WarnOptionValue{#1}{pagebackref}{`true' or `false'}%
3342 \fi
3343 \fi
3344 }

```

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

```

3345 \define@key{Hyp}{hyperindex}[true]{%
3346 \Hy@boolkey{hyperindex}{#1}%
3347 }

```

Configuration of encap char.

```

3348 \define@key{Hyp}{encap}[|]{%
3349 \def\HyInd@EncapChar{#1}%
3350 }

```

12 Language options

The \autoref feature depends on the language.

```

3351 \def\HyLang@afrikaans{%
3352 \def\equationautorefname{Vergelyking}%
3353 \def\footnoteautorefname{Voetnota}%
3354 \def\itemautorefname{Item}%
3355 \def\figureautorefname{Figuur}%
3356 \def\tableautorefname{Tabel}%
3357 \def\partautorefname{Deel}%
3358 \def\appendixautorefname{Bylae}%
3359 \def\chapterautorefname{Hoofstuk}%
3360 \def\sectionautorefname{Afdeling}%
3361 \def\subsectionautorefname{Subafdeling}%
3362 \def\subsubsectionautorefname{Subsubafdeling}%
3363 \def\paragraphautorefname{Paragraaf}%
3364 \def\subparagraphautorefname{Subparagraaf}%
3365 \def\FancyVerbLineautorefname{Lyn}%
3366 \def\theoremautorefname{Teorema}%
3367 \def\pageautorefname{Bladsy}%
3368 }
3369 \def\HyLang@english{%
3370 \def\equationautorefname{Equation}%
3371 \def\footnoteautorefname{footnote}%
3372 \def\itemautorefname{item}%
3373 \def\figureautorefname{Figure}%
3374 \def\tableautorefname{Table}%
3375 \def\partautorefname{Part}%
3376 \def\appendixautorefname{Appendix}%

```

```

3377 \def\chapterautorefname{chapter}%
3378 \def\sectionautorefname{section}%
3379 \def\subsectionautorefname{subsection}%
3380 \def\subsubsectionautorefname{subsubsection}%
3381 \def\paragraphautorefname{paragraph}%
3382 \def\subparagraphautorefname{subparagraph}%
3383 \def\FancyVerbLineautorefname{line}%
3384 \def\theoremautorefname{Theorem}%
3385 \def\pageautorefname{page}%
3386 }
3387 \def\HyLang@french{%
3388 \def\equationautorefname{'Equation}%
3389 \def\footnoteautorefname{note}%
3390 \def\itemautorefname{item}%
3391 \def\figureautorefname{Figure}%
3392 \def\tableautorefname{Tableau}%
3393 \def\partautorefname{Partie}%
3394 \def\appendixautorefname{Appendice}%
3395 \def\chapterautorefname{chapitre}%
3396 \def\sectionautorefname{section}%
3397 \def\subsectionautorefname{sous-section}%
3398 \def\subsubsectionautorefname{sous-sous-section}%
3399 \def\paragraphautorefname{paragraphe}%
3400 \def\subparagraphautorefname{sous-paragraphe}%
3401 \def\FancyVerbLineautorefname{ligne}%
3402 \def\theoremautorefname{Th\'eor\`eme}%
3403 \def\pageautorefname{page}%
3404 }
3405 \def\HyLang@german{%
3406 \def\equationautorefname{Gleichung}%
3407 \def\footnoteautorefname{Fu\ss note}%
3408 \def\itemautorefname{Punkt}%
3409 \def\figureautorefname{Abbildung}%
3410 \def\tableautorefname{Tabelle}%
3411 \def\partautorefname{Teil}%
3412 \def\appendixautorefname{Anhang}%
3413 \def\chapterautorefname{Kapitel}%
3414 \def\sectionautorefname{Abschnitt}%
3415 \def\subsectionautorefname{Unterabschnitt}%
3416 \def\subsubsectionautorefname{Unterunterabschnitt}%
3417 \def\paragraphautorefname{Absatz}%
3418 \def\subparagraphautorefname{Unterabsatz}%
3419 \def\FancyVerbLineautorefname{Zeile}%
3420 \def\theoremautorefname{Theorem}%
3421 \def\pageautorefname{Seite}%
3422 }
3423 \def\HyLang@italian{%
3424 \def\equationautorefname{Equazione}%
3425 \def\footnoteautorefname{nota}%
3426 \def\itemautorefname{punto}%
3427 \def\figureautorefname{Figura}%
3428 \def\tableautorefname{Tabella}%
3429 \def\partautorefname{Parte}%
3430 \def\appendixautorefname{Appendice}%
3431 \def\chapterautorefname{Capitolo}%
3432 \def\sectionautorefname{sezione}%
3433 \def\subsectionautorefname{sottosezione}%

```



```

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

```

Next commented section for Russian is provided by Olga Lapko.

Next follow the checked reference names with commented variants and explanations. All they are abbreviated and they won't create a grammatical problems in the *middle* of sentences.

The most weak points in these abbreviations are the `\equationautorefname`, `\theoremautorefname` and the `\FancyVerbLineautorefname`. But those three, and also the `\footnoteautorefname` are not *too* often referenced. Another rather weak point is the `\appendixautorefname`.

```

3477 \def\HyLang@russian{%

```

The abbreviated reference to the equation: it is not for “the good face of the book”, but maybe it will be better to get the company for the `\theoremautorefname`?

```

3478 \def\equationautorefname{\cyr\cyrv\cyrery\cyrr.}%

```

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

```
3479 % \def\equationautorefname{%
3480 %   \cyr\cyrv\cyrry\cyrr\cyra\cyrrh\cyre\cyrn\cyri\cyre
3481 % }%
```

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

```
3482 \def\footnoteautorefname{%
3483   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3484 }%
```

Commented form of the full synonym for “footnote”. It has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}”

```
3485 % \def\footnoteautorefname{%
3486 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3487 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3488 % }%
```

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

```
3489 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3490 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%

```

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

```
3491 \def\itemautorefname{\cyr\cyrp.}%
3492 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%

```

Names of the figure and table have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3493 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3494 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%

```

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

```
3495 \def\partautorefname{\cyr\cyrch.}%
3496 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3497 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%

```

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

```
3498 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3499 % \def\appendixautorefname{%
3500 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrh\cyre\cyrn\cyri\cyre
3501 % }%
```

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.

```
3502 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3503 \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.

```
3504 \def\paragraphautorefname{\cyr\cyrp.}%
3505 \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.

```
3506 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3507 % \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.

```
3508 \def\FancyVerbLineautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

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

```
3509 % \def\NomFancyVerbLineautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3510 % \def\AccFancyVerbLineautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

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

```
3511 % \def\FancyVerbLineautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

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 ...

```
3512 \def\theoremautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

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

```
3513 % \def\Nomtheoremautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3514 % \def\Acctheoremautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

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

```
3515 \def\pageautorefname{\cyr\cyrp.}%
3516 }
```

```
3517 \def\HyLang@spanish{%
3518 \def\equationautorefname{Ecuaci'on}%
3519 \def\footnoteautorefname{Nota a pie de p'agina}%
3520 \def\itemautorefname{Elemento}%
3521 \def\figureautorefname{Figura}%
3522 \def\tableautorefname{Tabla}%
3523 \def\partautorefname{Parte}%
3524 \def\appendixautorefname{Ap'endice}%
3525 \def\chapterautorefname{Cap'itulo}%
3526 \def\sectionautorefname{Secci'on}%
3527 \def\subsectionautorefname{Subsecci'on}%
3528 \def\subsubsectionautorefname{Subsubsecci'on}%
3529 \def\paragraphautorefname{P'arrafo}%
3530 \def\subparagraphautorefname{Subp'arrafo}%
3531 \def\FancyVerbLineautorefname{L'inea}%
3532 \def\theoremautorefname{Teorema}%
3533 \def\pageautorefname{P'agina}%
3534 }
```

```

3535 \def\HyLang@catalan{%
3536 \def\equationautorefname{Equaci\`o}%
3537 \def\footnoteautorefname{Nota al peu de p\`agina}%
3538 \def\itemautorefname{Element}%
3539 \def\figureautorefname{Figura}%
3540 \def\tableautorefname{Taula}%
3541 \def\partautorefname{Part}%
3542 \def\appendixautorefname{Ap\`endix}%
3543 \def\chapterautorefname{Cap\`itol}%
3544 \def\sectionautorefname{Secci\`o}%
3545 \def\subsectionautorefname{Subsecci\`o}%
3546 \def\subsubsectionautorefname{Subsubsecci\`o}%
3547 \def\paragraphautorefname{Par\`agraf}%
3548 \def\subparagraphautorefname{Subpar\`agraf}%
3549 \def\FancyVerbLineautorefname{L\`inia}%
3550 \def\theoremautorefname{Teorema}%
3551 \def\pageautorefname{P\`agina}%
3552 }

3553 \def\HyLang@vietnamese{%
3554 \def\equationautorefname{Ph\`uhorn{}}\ohorn{}ng tr\`inh}%
3555 \def\footnoteautorefname{Ch\`u th\`ich}%
3556 \def\itemautorefname{m\`d{u}c}%
3557 \def\figureautorefname{H\`inh}%
3558 \def\tableautorefname{B\`h{a}ng}%
3559 \def\partautorefname{Ph\`acircumflex{n}}%
3560 \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3561 \def\chapterautorefname{ch\`uhorn{}}\ohorn{}ng}%
3562 \def\sectionautorefname{m\`d{u}c}%
3563 \def\subsectionautorefname{m\`d{u}c}%
3564 \def\subsubsectionautorefname{m\`d{u}c}%
3565 \def\paragraphautorefname{\dj{}o\`d{a}n}%
3566 \def\subparagraphautorefname{\dj{}o\`d{a}n}%
3567 \def\FancyVerbLineautorefname{d\`ong}%
3568 \def\theoremautorefname{\DJ{}d{i}nh l\`y}%
3569 \def\pageautorefname{Trang}%
3570 }

```

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

```

3571 \def\HyLang@addto#1#2{%
3572   #2%
3573   \@temptokena{#2}%
3574   \ifx#1\relax
3575     \let#1\@empty
3576   \fi
3577   \ifx#1\@undefined
3578     \edef#1{\the\@temptokena}%
3579   \else
3580     \toks@\expandafter{#1}%
3581     \edef#1{\the\toks@\the\@temptokena}%
3582   \fi
3583   \@temptokena{}\toks@\@temptokena
3584 }

3585 \def\HyLang@DeclareLang#1#2#3{%
3586   \@ifpackagewith{babel}{#1}{%
3587     \expandafter\HyLang@addto
3588     \csname extras#1\expandafter\endcsname

```

```

3589 \csname HyLang@#2\endcsname
3590 \begingroup
3591 \edef\x{\endgroup
3592   #3%
3593 }%
3594 \x
3595 \@namedef{HyLang@#1@done}{}%
3596 }{}%
3597 \begingroup
3598 \edef\x##1##2{%
3599   \noexpand\ifx##2\relax
3600     \errmessage{No definitions for language #2' found!}%
3601   \noexpand\fi
3602 \endgroup
3603 \noexpand\define@key{Hyp}{#1}[]{}%
3604 \noexpand\@ifundefined{HyLang@#1@done}{%
3605   \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3606   #3%
3607   \noexpand\@namedef{HyLang@#1@done}{}%
3608 }{}%
3609 }%
3610 }%
3611 \expandafter\x\csname extras#1\expandafter\endcsname
3612 \csname HyLang@#2\endcsname
3613 }
3614 \HyLang@DeclareLang{english}{english}{}
3615 \HyLang@DeclareLang{UKenglish}{english}{}
3616 \HyLang@DeclareLang{british}{english}{}
3617 \HyLang@DeclareLang{USenglish}{english}{}
3618 \HyLang@DeclareLang{american}{english}{}
3619 \HyLang@DeclareLang{german}{german}{}
3620 \HyLang@DeclareLang{austrian}{german}{}
3621 \HyLang@DeclareLang{ngerman}{german}{}
3622 \HyLang@DeclareLang{naustrian}{german}{}
3623 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3624 \HyLang@DeclareLang{brazil}{portuges}{}
3625 \HyLang@DeclareLang{brazilian}{portuges}{}
3626 \HyLang@DeclareLang{portuguese}{portuges}{}
3627 \HyLang@DeclareLang{spanish}{spanish}{}
3628 \HyLang@DeclareLang{catalan}{catalan}{}
3629 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3630 \HyLang@DeclareLang{french}{french}{}
3631 \HyLang@DeclareLang{frenchb}{french}{}
3632 \HyLang@DeclareLang{francais}{french}{}
3633 \HyLang@DeclareLang{acadian}{french}{}
3634 \HyLang@DeclareLang{canadien}{french}{}
3635 \HyLang@DeclareLang{italian}{italian}{}
3636 \HyLang@DeclareLang{magyar}{magyar}{}
3637 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3638 \DeclareVoidOption{vietnamese}{}%
3639 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3640 \Hy@AtEndOfPackage{%
3641   \@ifundefined{T@PU}{}{}%
3642   \input{puvnc.def}%
3643 }%
3644 }%

```

```

3645 }
3646 \DeclareVoidOption{vietnam}{%
3647   \HyLang@addto\extrasvietnam\HyLang@vietnamese
3648   \Hy@AtEndOfPackage{%
3649     \@ifundefined{T@PU}{-}{%
3650       \input{puvnenc.def}%
3651     }%
3652   }%
3653 }

```

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

```

3654 \DeclareVoidOption{arabic}{%
3655   \Hy@AtEndOfPackage{%
3656     \@ifundefined{T@PU}{-}{%
3657       \input{puarenc.def}%
3658     }%
3659   }%
3660 }

```

13 Options to change appearance of links

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

```

3661 \define@key{Hyp}{colorlinks}[true]{%
3662   \Hy@boolkey{colorlinks}{#1}%
3663 }
3664 \DeclareVoidOption{hidelinks}{%
3665   \Hy@colorlinksfalse
3666   \Hy@ocgcolorlinksfalse
3667   \Hy@frenchlinksfalse
3668   \def\Hy@colorlink##1{\begingroup}%
3669   \def\Hy@endcolorlink{\endgroup}%
3670   \def\@pdfborder{0 0 0}%
3671   \let\@pdfborderstyle\ltx@empty
3672 }
3673 \define@key{Hyp}{ocgcolorlinks}[true]{%
3674   \Hy@boolkey{ocgcolorlinks}{#1}%
3675 }
3676 \Hy@AtBeginDocument{%
3677   \begingroup
3678   \@ifundefined{OBJ@OCG@view}{%
3679     \ifHy@ocgcolorlinks
3680       \Hy@Warning{%
3681         Driver does not support `ocgcolorlinks',\MessageBreak
3682         using `colorlinks' instead%
3683       }%
3684     \fi
3685   }{}%
3686   \endgroup
3687 }
3688 \define@key{Hyp}{frenchlinks}[true]{%
3689   \Hy@boolkey{frenchlinks}{#1}%
3690 }

```

14 Bookmarking

```

3691 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

3692 \expandafter\ifx\csname chapter\endcsname\relax
3693 \def\toclevel@part{0}%
3694 \else
3695 \def\toclevel@part{-1}%
3696 \fi
3697 \def\toclevel@chapter{0}
3698 \def\toclevel@section{1}
3699 \def\toclevel@subsection{2}
3700 \def\toclevel@subsubsection{3}
3701 \def\toclevel@paragraph{4}
3702 \def\toclevel@subparagraph{5}
3703 \def\toclevel@figure{0}
3704 \def\toclevel@table{0}
3705 \@ifpackageloaded{listings}{%
3706 \providecommand*\theHlstlisting{\thelstlisting}%
3707 \providecommand*\toclevel@lstlisting{0}%
3708 }{}
3709 \@ifpackageloaded{listing}{%
3710 \providecommand*\theHlisting{\thelisting}%
3711 \providecommand*\toclevel@listing{0}%
3712 }{}

3713 \define@key{Hyp}{bookmarks}[true]{%
3714 \Hy@boolkey{bookmarks}{#1}%
3715 }

3716 \define@key{Hyp}{bookmarksopen}[true]{%
3717 \Hy@boolkey{bookmarksopen}{#1}%
3718 }

```

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.

```

3719 \let\Hy@bookmarksdepth\c@tocdepth
3720 \define@key{Hyp}{bookmarksdepth}[]{}%
3721 \begingroup
3722 \edef\x{#1}%
3723 \ifx\x\empty
3724 \global\let\Hy@bookmarksdepth\c@tocdepth
3725 \else
3726 \@ifundefined{toclevel@\x}{%
3727 \@onelevel@sanitize\x
3728 \edef\y{\expandafter\@car\x\@nil}%
3729 \ifcase 0\expandafter\ifx\y-1\fi
3730 \expandafter\ifnum\expandafter`\y>47 %
3731 \expandafter\ifnum\expandafter`\y<58 1\fi\fi\relax
3732 \Hy@Warning{Unknown document division name (\x)}%
3733 \else
3734 \setbox\z@=\hbox{%
3735 \count@=\x
3736 \xdef\Hy@bookmarksdepth{\the\count@}%

```

```

3737     }%
3738     \fi
3739   }{%
3740     \setbox\z@=\hbox{%
3741       \count@=\csname toplevel@\x\endcsname
3742       \xdef\Hy@bookmarksdepth{\the\count@}%
3743     }%
3744   }%
3745   \fi
3746   \endgroup
3747 }

```

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

```

3748 \define@key{Hyp}{bookmarksopenlevel}{%
3749   \def\@bookmarksopenlevel{#1}%
3750 }
3751 \def\@bookmarksopenlevel{\maxdimen}
3752 % `bookmarkstype' to specify which `toc' file to mimic
3753 \define@key{Hyp}{bookmarkstype}{%
3754   \def\Hy@bookmarkstype{#1}%
3755 }
3756 \def\Hy@bookmarkstype{toc}

```

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

```

3757 \define@key{Hyp}{bookmarksnumbered}[true]{%
3758   \Hy@boolkey{bookmarksnumbered}{#1}%
3759 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3760 \define@key{Hyp}{CJKbookmarks}[true]{%
3761   \Hy@boolkey{CJKbookmarks}{#1}%
3762 }
3763 \def\Hy@temp#1{%
3764   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3765 }
3766 \def\Hy@@temp#1#2#3{%
3767   \define@key{Hyp}{#2color}{%
3768     \HyColor@HyperrefColor{##1}#1%
3769   }%
3770   \def#1{#3}%
3771 }
3772 \Hy@temp{link}{red}
3773 \Hy@temp{anchor}{black}
3774 \Hy@temp{cite}{green}
3775 \Hy@temp{file}{cyan}
3776 \Hy@temp{url}{magenta}
3777 \Hy@temp{menu}{red}
3778 \Hy@temp{run}{\@filecolor}
3779 \define@key{Hyp}{pagecolor}{%
3780   \Hy@WarningPageColor
3781 }
3782 \def\Hy@WarningPageColor{%
3783   \Hy@WarningNoLine{Option `pagecolor' is not available anymore}%
3784   \global\let\Hy@WarningPageColor\relax
3785 }
3786 \define@key{Hyp}{allcolors}{%
3787   \HyColor@HyperrefColor{#1}\@linkcolor

```



```

3788 \HyColor@HyperrefColor{#1}\@anchorcolor
3789 \HyColor@HyperrefColor{#1}\@citecolor
3790 \HyColor@HyperrefColor{#1}\@filecolor
3791 \HyColor@HyperrefColor{#1}\@urlcolor
3792 \HyColor@HyperrefColor{#1}\@menucolor
3793 \HyColor@HyperrefColor{#1}\@runcolor
3794 }

3795 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3796 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3797 \let\@baseurl\@empty
3798 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3799 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3800 \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.

```

3801 \let\@pdfpagetransition\relax
3802 \define@key{Hyp}{pdfpagetransition}{%
3803   \def\@pdfpagetransition{#1}%
3804 }

```

`\@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.

```

3805 \let\@pdfpageduration\relax
3806 \define@key{Hyp}{pdfpageduration}{%
3807   \def\@pdfpageduration{#1}%
3808   \Hy@Match\@pdfpageduration}{%
3809     ^(|[0-9]+\.\?[0-9]*|[0-9]*\.\?[0-9]+)$%
3810   }{%
3811     \Hy@Warning{%
3812       Invalid value `'\@pdfpageduration'\MessageBreak
3813       of option `pdfpageduration'\MessageBreak
3814       is replaced by an empty value%
3815     }%
3816     \let\@pdfpageduration\ltx@empty
3817   }%
3818 }

```

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.

```

3819 \newif\ifHy@useHidKey
3820 \Hy@useHidKeyfalse
3821 \define@key{Hyp}{pdfpagehidden}[true]{%
3822   \Hy@boolkey{pdfpagehidden}{#1}%
3823   \ifHy@pdfpagehidden
3824     \global\Hy@useHidKeytrue
3825   \fi
3826 }

```

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).

```

3827 \def\Hy@ColorList{cite,file,link,menu,run,url}
3828 \@for\Hy@temp:=\Hy@ColorList\do{%
3829   \edef\Hy@temp{%
3830     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3831       \noexpand\HyColor@HyperrefBorderColor
3832       {##1}%
3833       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3834       {hyperref}%
3835       {\Hy@temp bordercolor}%
3836     }%
3837   }%
3838   \Hy@temp
3839 }
3840 \define@key{Hyp}{pagebordercolor}{%
3841   \Hy@WarningPageBorderColor
3842 }
3843 \def\Hy@WarningPageBorderColor{%
3844   \Hy@WarningNoLine{Option `pagebordercolor' is not available anymore}%
3845   \global\let\Hy@WarningPageBorderColor\relax
3846 }
3847 \define@key{Hyp}{allbordercolors}{%
3848   \def\Hy@temp##1##2{%
3849     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3850   }%
3851   \Hy@temp\@citebordercolor{cite}%
3852   \Hy@temp\@filebordercolor{file}%
3853   \Hy@temp\@linkbordercolor{link}%
3854   \Hy@temp\@menubordercolor{menu}%
3855   \Hy@temp\@runbordercolor{run}%
3856   \Hy@temp\@urlbordercolor{url}%
3857 }
3858 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3859 \Hy@DefNameKey{pdfhighlight}{%
3860   \do{/I}{Invert}%
3861   \do{/N}{None}%
3862   \do{/O}{Outline}%
3863   \do{/P}{Push}%
3864 }
3865 \define@key{Hyp}{pdfborder}{%
3866   \let\Hy@temp\@pdfborder
3867   \def\@pdfborder{#1}%
3868   \Hy@Match\@pdfborder}{%
3869     ^\HyPat@NonNegativeReal/ %
3870     \HyPat@NonNegativeReal/ %
3871     \HyPat@NonNegativeReal/%
3872     ( ?\[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%%
3873   }{ }{%
3874     \Hy@Warning{%

```

```

3875     Invalid value ` \@pdfborder'\MessageBreak
3876     for option `pdfborder'.\MessageBreak
3877     Option setting is ignored%
3878 }%
3879 \let\@pdfborder\Hy@temp
3880 }%
3881 }
3882 \define@key{Hyp}{pdfborderstyle}{%
3883 \let\Hy@temp\@pdfborderstyle
3884 \def\@pdfborderstyle{#1}%
3885 \Hy@Match\@pdfborderstyle}{}%
3886 ~%
3887 ( */Type */Border%
3888 | */W +\HyPat@NonNegativeReal/%
3889 | */S */[SDBIU]%
3890 | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))?)?]%
3891 )* *$%
3892 }{}{%
3893 \Hy@Warning{%
3894     Invalid value ` \@pdfborderstyle'\MessageBreak
3895     for option `pdfborderstyle'.\MessageBreak
3896     Option setting is ignored%
3897 }%
3898 \let\@pdfborderstyle\Hy@temp
3899 }%
3900 }
3901 \def\Hy@setpdfborder{%
3902 \ifx\@pdfborder\@empty
3903 \else
3904 /Border[\@pdfborder]%
3905 \fi
3906 \ifx\@pdfborderstyle\@empty
3907 \else
3908 /BS<<\@pdfborderstyle>>%
3909 \fi
3910 }
3911 \Hy@DefNameKey{pdfpagemode}{%
3912 \do{UseNone}{}%
3913 \do{UseOutlines}{}%
3914 \do{UseThumbs}{}%
3915 \do{FullScreen}{}%
3916 \do{UseOC}{PDF 1.5}%
3917 \do{UseAttachments}{PDF 1.6}%
3918 }
3919 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3920 \do{UseNone}{}%
3921 \do{UseOutlines}{}%
3922 \do{UseThumbs}{}%
3923 \do{FullScreen}{}%
3924 \do{UseOC}{PDF 1.5}%
3925 \do{UseAttachments}{PDF 1.6}%
3926 }
3927 \Hy@DefNameKey{pdfdirection}{%
3928 \do{L2R}{Left to right}%
3929 \do{R2L}{Right to left}%
3930 }
3931 \Hy@DefNameKey{pdfviewarea}{%

```

```

3932 \do{MediaBox}{}%
3933 \do{CropBox}{}%
3934 \do{BleedBox}{}%
3935 \do{TrimBox}{}%
3936 \do{ArtBox}{}%
3937 }
3938 \Hy@DefNameKey{pdfviewclip}{%
3939 \do{MediaBox}{}%
3940 \do{CropBox}{}%
3941 \do{BleedBox}{}%
3942 \do{TrimBox}{}%
3943 \do{ArtBox}{}%
3944 }
3945 \Hy@DefNameKey{pdfprintarea}{%
3946 \do{MediaBox}{}%
3947 \do{CropBox}{}%
3948 \do{BleedBox}{}%
3949 \do{TrimBox}{}%
3950 \do{ArtBox}{}%
3951 }
3952 \Hy@DefNameKey{pdfprintclip}{%
3953 \do{MediaBox}{}%
3954 \do{CropBox}{}%
3955 \do{BleedBox}{}%
3956 \do{TrimBox}{}%
3957 \do{ArtBox}{}%
3958 }
3959 \Hy@DefNameKey{pdfprintscaling}{%
3960 \do{AppDefault}{}%
3961 \do{None}{}%
3962 }
3963 \Hy@DefNameKey{pdfduplex}{%
3964 \do{Simplex}{}%
3965 \do{DuplexFlipShortEdge}{}%
3966 \do{DuplexFlipLongEdge}{}%
3967 }
3968 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3969 \do{true}{}%
3970 \do{false}{}%
3971 }
3972 \define@key{Hyp}{pdfprintpagerange}{%
3973 \def\@pdfprintpagerange{#1}%
3974 }
3975 \Hy@DefNameKey{pdfnumcopies}{%
3976 \do{2}{two copies}%
3977 \do{3}{three copies}%
3978 \do{4}{four copies}%
3979 \do{5}{five copies}%
3980 }
3981 \define@key{Hyp}{pdfusetitle}[true]{%
3982 \Hy@boolkey{pdfusetitle}{#1}%
3983 }
3984 \def\HyXeTeX@CheckUnicode{%
3985 \ifxetex
3986 \ifHy@unicode
3987 \else
3988 \Hy@WarningNoLine{%

```

```

3989     XeTeX driver only supports unicode.\MessageBreak
3990     Enabling option `unicode'%
3991   }%
3992   \kvsetkeys{Hyp}{unicode}%
3993   \fi
3994 \else
3995   \let\HyXeTeX@CheckUnicode\relax
3996 \fi
3997 }
3998 \def\HyPsd@PrerenderUnicode#1{%
3999   \begingroup
4000   \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
4001   \else
4002     \sbox0{%
4003       \let\GenericInfo\@gobbletwo
4004       \let\GenericWarning\@gobbletwo
4005       \let\GenericError\@gobblefour
4006       \PrerenderUnicode{#1}%
4007     }%
4008   \fi
4009   \endgroup
4010 }
4011 \define@key{Hyp}{pdftitle}{%
4012   \HyXeTeX@CheckUnicode
4013   \HyPsd@XeTeXBigCharstrue
4014   \HyPsd@PrerenderUnicode{#1}%
4015   \pdfstringdef\@pdftitle{#1}%
4016 }
4017 \define@key{Hyp}{pdfauthor}{%
4018   \HyXeTeX@CheckUnicode
4019   \HyPsd@XeTeXBigCharstrue
4020   \HyPsd@PrerenderUnicode{#1}%
4021   \pdfstringdef\@pdfauthor{#1}%
4022 }
4023 \define@key{Hyp}{pdfproducer}{%
4024   \HyXeTeX@CheckUnicode
4025   \HyPsd@XeTeXBigCharstrue
4026   \HyPsd@PrerenderUnicode{#1}%
4027   \pdfstringdef\@pdfproducer{#1}%
4028   \ifxetex
4029     \Hy@Warning{%
4030       pdfproducer: %
4031       xdvipdfmx will use its own setting\MessageBreak
4032       instead of the value given%
4033     }%
4034   \else
4035     \def\Hy@temp{hdvipdfm}%
4036     \ifx\Hy@driver\Hy@temp
4037       \Hy@Warning{%
4038         pdfproducer: %
4039         dvipdfm(x) will use its own setting\MessageBreak
4040         instead of the value given%
4041       }%
4042     \fi
4043   \fi
4044 }
4045 \define@key{Hyp}{pdfcreator}{%

```

```

4046 \HyXeTeX@CheckUnicode
4047 \HyPsd@XeTeXBigCharstrue
4048 \HyPsd@PrerenderUnicode{#1}%
4049 \pdfstringdef\@pdfcreator{#1}%
4050 }
4051 \define@key{Hyp}{pdfcreationdate}{%
4052 \begingroup
4053 \Hy@unicodedefalse
4054 \pdfstringdef\@pdfcreationdate{#1}%
4055 \endgroup
4056 }
4057 \define@key{Hyp}{pdfmoddate}{%
4058 \begingroup
4059 \Hy@unicodedefalse
4060 \pdfstringdef\@pdfmoddate{#1}%
4061 \endgroup
4062 }
4063 \define@key{Hyp}{pdfsubject}{%
4064 \HyXeTeX@CheckUnicode
4065 \HyPsd@XeTeXBigCharstrue
4066 \HyPsd@PrerenderUnicode{#1}%
4067 \pdfstringdef\@pdfsubject{#1}%
4068 }
4069 \define@key{Hyp}{pdfkeywords}{%
4070 \HyXeTeX@CheckUnicode
4071 \HyPsd@XeTeXBigCharstrue
4072 \HyPsd@PrerenderUnicode{#1}%
4073 \pdfstringdef\@pdfkeywords{#1}%
4074 }
4075 \define@key{Hyp}{pdftrapped}{%
4076 \lowercase{\edef\Hy@temp{#1}}%
4077 \ifx\Hy@temp\HyInfo@trapped@true
4078 \def\@pdftrapped{True}%
4079 \else
4080 \ifx\Hy@temp\HyInfo@trapped@false
4081 \def\@pdftrapped{False}%
4082 \else
4083 \ifx\Hy@temp\HyInfo@trapped@unknown
4084 \def\@pdftrapped{Unknown}%
4085 \else
4086 \ifx\Hy@temp\@empty
4087 \else
4088 \Hy@Warning{%
4089 Unsupported value `#1'\MessageBreak
4090 for option `pdftrapped'%
4091 }%
4092 \fi
4093 \def\@pdftrapped{}%
4094 \fi
4095 \fi
4096 \fi
4097 }
4098 \def\HyInfo@trapped@true{true}
4099 \def\HyInfo@trapped@false{false}
4100 \def\HyInfo@trapped@unknown{unknown}
4101 \def\HyInfo@TrappedUnsupported{%
4102 \ifx\@pdftrapped\@empty

```

```

4103 \else
4104   \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
4105   \gdef\HyInfo@TrappedUnsupported{}%
4106 \fi
4107 }
4108 \define@key{Hyp}{pdfinfo}{%
4109   \kvsetkeys{pdfinfo}{#1}%
4110 }
4111 \def\Hy@temp#1{%
4112   \lowercase{\Hy@temp@A{#1}}{#1}%
4113 }
4114 \def\Hy@temp@A#1#2{%
4115   \define@key{pdfinfo}{#2}{%
4116     \hypersetup{pdf#1={##1}}%
4117   }%
4118 }
4119 \Hy@temp{Title}
4120 \Hy@temp{Author}
4121 \Hy@temp{Keywords}
4122 \Hy@temp{Subject}
4123 \Hy@temp{Creator}
4124 \Hy@temp{Producer}
4125 \Hy@temp{CreationDate}
4126 \Hy@temp{ModDate}
4127 \Hy@temp{Trapped}
4128 \newif\ifHyInfo@AddonUnsupported
4129 \kv@set@family@handler{pdfinfo}{%
4130   \HyInfo@AddonHandler{#1}{#2}%
4131 }
4132 \let\HyInfo@do\relax
4133 \def\HyInfo@AddonHandler#1#2{%
4134   \ifx\kv@value\relax
4135     \Hy@Warning{%
4136       Option 'pdfinfo': ignoring key '\kv@key' without value%
4137     }%
4138   \else
4139     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
4140     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4141     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4142       \ifHyInfo@AddonUnsupported
4143         \Hy@Warning{%
4144           This driver does not support additional\MessageBreak
4145           information entries, therefore\MessageBreak
4146           '\kv@key' is ignored%
4147         }%
4148       \else
4149         \def\HyInfo@tmp##1{%
4150           \kv@define@key{pdfinfo}{##1}{%
4151             \HyXeTeX@CheckUnicode
4152             \HyPsd@XeTeXBigCharstrue
4153             \HyPsd@PrerenderUnicode{####1}%
4154             \pdfstringdef\HyInfo@Value{####1}%
4155             \global\expandafter
4156             \let\csname HyInfo@Value@##1\endcsname
4157             \HyInfo@Value
4158           }%
4159         }%

```

```

4160 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4161 \global\expandafter
4162 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4163 \csname KV@pdfinfo@\HyInfo@Key\endcsname
4164 \xdef\HyInfo@AddonList{%
4165 \HyInfo@AddonList
4166 \HyInfo@do{\HyInfo@Key}%
4167 }%
4168 \kv@parse@normalized{%
4169 \HyInfo@Key={#2}%
4170 }{%
4171 \kv@processor@default{pdfinfo}%
4172 }%
4173 \fi
4174 \else
4175 \kv@parse@normalized{%
4176 \HyInfo@Key={#2}%
4177 }{%
4178 \kv@processor@default{pdfinfo}%
4179 }%
4180 \fi
4181 \fi
4182 }
4183 \def\HyInfo@GenerateAddons{%
4184 \ifHyInfo@AddonUnsupported
4185 \def\HyInfo@Addons{}%
4186 \else
4187 \begingroup
4188 \toks@{}%
4189 \def\HyInfo@do##1{%
4190 \EdefEscapeName\HyInfo@Key{##1}%
4191 \edef\x{%
4192 \toks@{%
4193 \the\toks@
4194 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4195 }%
4196 }%
4197 \x
4198 }%
4199 \HyInfo@AddonList
4200 \edef\x{\endgroup
4201 \def\noexpand\HyInfo@Addons{\the\toks@}%
4202 }%
4203 \x
4204 \fi
4205 }
4206 \global\let\HyInfo@AddonList\ltx@empty
4207 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
4208 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
4209 \let\setpdfinkmargin@gobble
4210 \def\calculate@pdfview#1 #2\{%
4211 \def\@pdfview{#1}%
4212 \ifx\#2\%
4213 \def\@pdfviewparams{-32768}%
4214 \else
4215 \def\@pdfviewparams{#2}%
4216 \fi

```



```

4217 }
4218 \begingroup\expandafter\expandafter\expandafter\endgroup
4219 \expandafter\ifx\csname numexpr\endcsname\relax
4220   \def\Hy@number#1{%
4221     \expandafter\@firstofone\expandafter{\number#1}%
4222   }%
4223 \else
4224   \def\Hy@number#1{%
4225     \the\numexpr#1\relax
4226   }%
4227 \fi
4228 \define@key{Hyp}{pdfstartpage}{%
4229   \ifx\#1\%
4230     \let\@pdfstartpage\ltx@empty
4231   \else
4232     \edef\@pdfstartpage{\Hy@number{#1}}%
4233   \fi
4234 }%
4235 \define@key{Hyp}{pdfstartview}{%
4236   \ifx\#1\%
4237     \let\@pdfstartview\ltx@empty
4238   \else
4239     \hypercalcbpdef\@pdfstartview{/#1}%
4240   \fi
4241 }
4242 \def\HyPat@NonNegativeReal/{%
4243   \ *([0-9]+\.[0-9]*| [0-9]*\.[0-9]+) *%
4244 }
4245 \define@key{Hyp}{pdfremotestartview}{%
4246   \ifx\#1\%
4247     \def\@pdfremotestartview{/Fit}%
4248   \else
4249     \hypercalcbpdef\@pdfremotestartview{#1}%
4250     \edef\@pdfremotestartview{\@pdfremotestartview}%
4251     \Hy@Match\@pdfremotestartview{}{%
4252       ^{XYZ(%
4253         ()| %
4254         (null|-?\HyPat@NonNegativeReal/) %
4255         (null|-?\HyPat@NonNegativeReal/) %
4256         (null|\HyPat@NonNegativeReal/)%
4257       )| % end of "XYZ"
4258       Fit(%
4259         ()| %
4260         B| %
4261         (H|V|BH|BV)(%
4262           ()| %
4263           (null|\HyPat@NonNegativeReal/)%
4264         )| %
4265         R %
4266         \HyPat@NonNegativeReal/ %
4267         \HyPat@NonNegativeReal/ %
4268         \HyPat@NonNegativeReal/ %
4269         \HyPat@NonNegativeReal/%
4270       ) % end of "Fit"
4271     )$%
4272   }{}{%
4273     \Hy@Warning{%

```

```

4274      Invalid value ` \@pdfremotestartview'\MessageBreak
4275      of `pdfremotestartview'\MessageBreak
4276      is replaced by `Fit'%
4277      }%
4278      \let\@pdfremotestartview\@empty
4279      }%
4280      \ifx\@pdfremotestartview\@empty
4281      \def\@pdfremotestartview{/Fit}%
4282      \else
4283      \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4284      \fi
4285      \fi
4286      }
4287      \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4288      \define@key{Hyp}{pdftoolbar}[true]{%
4289      \Hy@boolkey{pdftoolbar}{#1}%
4290      }
4291      \define@key{Hyp}{pdfmenubar}[true]{%
4292      \Hy@boolkey{pdfmenubar}{#1}%
4293      }
4294      \define@key{Hyp}{pdfwindowui}[true]{%
4295      \Hy@boolkey{pdfwindowui}{#1}%
4296      }
4297      \define@key{Hyp}{pdffitwindow}[true]{%
4298      \Hy@boolkey{pdffitwindow}{#1}%
4299      }
4300      \define@key{Hyp}{pdfcenterwindow}[true]{%
4301      \Hy@boolkey{pdfcenterwindow}{#1}%
4302      }
4303      \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4304      \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4305      }
4306      \define@key{Hyp}{pdfa}[true]{%
4307      \Hy@boolkey{pdfa}{#1}%
4308      }
4309      \define@key{Hyp}{pdfnewwindow}[true]{%
4310      \def\Hy@temp{#1}%
4311      \ifx\Hy@temp\@empty
4312      \Hy@pdfnewwindowsetfalse
4313      \else
4314      \Hy@pdfnewwindowsettrue
4315      \Hy@boolkey{pdfnewwindow}{#1}%
4316      \fi
4317      }
4318      \def\Hy@SetNewWindow{%
4319      \ifHy@pdfnewwindowset
4320      /NewWindow %
4321      \ifHy@pdfnewwindow true\else false\fi
4322      \fi
4323      }
4324      \Hy@DefNameKey{pdfpagelayout}{%
4325      \do{SinglePage}{}%
4326      \do{OneColumn}{}%
4327      \do{TwoColumnLeft}{}%
4328      \do{TwoColumnRight}{}%
4329      \do{TwoPageLeft}{PDF 1.5}%
4330      \do{TwoPageRight}{PDF 1.5}%

```

```

4331 }
4332 \define@key{Hyp}{pdflang}{%
4333   \edef\@pdflang{#1}%
4334   \def\Hy@temp{\relax}%
4335   \ifx\@pdflang\Hy@temp
4336     \let\@pdflang\relax
4337   \fi
4338   \ifx\@pdflang\relax
4339     \else
4340       \ifx\@pdflang\ltx@empty
4341       \else

```

Test according to ABNF of RFC 3066.

```

4342   \Hy@Match\@pdflang{icase}{%
4343     ~%
4344     [a-z]{1,8}%
4345     (-[a-z0-9]{1,8})*%
4346     $%
4347   }{%

```

Test according to ABNF of RFC 5646.

```

4348   \Hy@Match\@pdflang{icase}{%
4349     ~%
4350     (%
4351       % langtag
4352       (% language
4353         [a-z]{2,3}%
4354         ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4355         |[a-z]{4}% reserved for future use
4356         |[a-z]{5,8}% registered language subtag
4357       )%
4358       (-[a-z]{4})?% script
4359       (-([a-z]{2}|[0-9]{3}))?% region
4360       (-([a-z]{5,8}|[0-9][a-z0-9]{3}))?% variant
4361       (-[0-9a-wyz](-[a-z0-9]{2,8})+)% extension
4362       (-x(-[a-z0-9]{1,8})+)% privateuse
4363       % privateuse
4364       |x(-[a-z0-9]{1,8})+%
4365       % grandfathered/irregular
4366       |en-GB-oed%
4367       |i-(ami|bnn|default|enochian|hak|klinton|lux|
4368         mingo|navajo|pwn|tao|tay|tsu)%
4369       |sgn-(BE-FR|BE-NL|CH-DE)%
4370       % grandfathered/regular
4371       |art-lojban%
4372       |cel-gaulish%
4373       |no-(bok|nyn)%
4374       |zh-(guoyu|hakka|min|min-nan|xiang)%
4375     )%
4376     $%
4377   }{%

```

Test for unique extensions.

```

4378   \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4379   \Hy@Match\@pdflang{icase}{~x-}{}%
4380   % remove privateuse
4381   \edef\Hy@temp{-\@pdflang}%
4382   \Hy@Match\Hy@temp{icase}{%
4383     ~%

```

```

4384      (%)
4385      (-[a-wyz0-9]|-[a-z0-9]{2,8})*%
4386      )%
4387      -x-%
4388      }{%
4389      \edef\Hy@temp{%
4390      \expandafter\strip@prefix\pdfastmatch1%
4391      }%
4392      }{}%
4393      \Hy@Match\Hy@temp{icase}{%
4394      (-[a-wyz0-9]-).*\ltx@backslashchar1%
4395      }{%
4396      \Hy@Warning{%
4397      Invalid language identifier `#1'\MessageBreak
4398      for option `pdfang', because it violates\MessageBreak
4399      well-formedness defined in RFC 4646\MessageBreak
4400      by duplicate singleton subtags%
4401      }%
4402      \let\@pdfang\relax
4403      }{}%
4404      }%
4405      }{}%

```

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

```

4406      \ifx\@pdfang\relax
4407      \else
4408      \Hy@Match\@pdfang{icase}{%
4409      ~%
4410      [a-zA-Z]{2}-%
4411      (%
4412      aa|AA|%
4413      [qQ][m-zA-Z]|%
4414      [xX][a-zA-Z]|%
4415      zz|ZZ%
4416      )%
4417      (-|%)%
4418      }{%
4419      \Hy@Warning{%
4420      Invalid language identifier `#1'\MessageBreak
4421      for option `pdfang' because of invalid country code%
4422      \MessageBreak
4423      in second subtag (RFC 3066)%
4424      }%
4425      \let\@pdfang\relax
4426      }{}%
4427      \fi
4428      }{%
4429      \Hy@Warning{%
4430      Invalid language identifier `#1'\MessageBreak
4431      for option `pdfang', because it violates\MessageBreak
4432      well-formedness defined in RFC 5646%
4433      }%
4434      \let\@pdfang\relax
4435      }%
4436      }{%
4437      \Hy@Warning{%
4438      Invalid language identifier `#1'\MessageBreak
4439      for option `pdfang' (RFC 3066)%

```

```

4440     }%
4441     \let\@pdflang\relax
4442     }%
4443     \fi
4444     \fi
4445 }
4446 \define@key{Hyp}{pdfpagelabels}[true]{%
4447   \Hy@boolkey{pdfpagelabels}{#1}%
4448 }
4449 \define@key{Hyp}{pdfescapeform}[true]{%
4450   \Hy@boolkey{pdfescapeform}{#1}%
4451 }

```

Default values:

```

4452 \def\@linkbordercolor{1 0 0}
4453 \def\@urlbordercolor{0 1 1}
4454 \def\@menubordercolor{1 0 0}
4455 \def\@filebordercolor{0 .5 .5}
4456 \def\@runbordercolor{0 .7 .7}
4457 \def\@citebordercolor{0 1 0}
4458 \def\@pdfhighlight{/I}
4459 \let\@pdftitle\ltx@empty
4460 \let\@pdfauthor\ltx@empty
4461 \let\@pdfproducer\relax
4462 \def\@pdfcreator{LaTeX with hyperref package}
4463 \let\@pdfcreationdate\ltx@empty
4464 \let\@pdfmoddate\ltx@empty
4465 \let\@pdfsubject\ltx@empty
4466 \let\@pdfkeywords\ltx@empty
4467 \let\@pdftrapped\ltx@empty
4468 \let\@pdfpagescrop\ltx@empty
4469 \def\@pdfstartview{/Fit}
4470 \def\@pdfremotestartview{/Fit}
4471 \def\@pdfstartpage{1}
4472 \let\@pdfprintpagerange\ltx@empty
4473 \let\@pdflang\relax
4474 \let\PDF@SetupDoc\@empty
4475 \let\PDF@FinishDoc\@empty
4476 \let\phantomsection\@empty
4477 \let\special@paper\@empty
4478 \def\HyperDestNameFilter#1{#1}
4479 \Hy@AtBeginDocument{%
4480   \begingroup
4481     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4482     \dimen@=\x\relax
4483     \ifdim\dimen@>\z@
4484       \else
4485         \dimen@=11in\relax
4486         \Hy@WarningNoLine{%
4487           Height of page (\expandafter\string\x) %
4488           is invalid (\the\x),\MessageBreak
4489           using 11in%
4490         }%
4491       \fi
4492       \dimen@=0.99626401\dimen@
4493       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4494     \endgroup
4495 }

```

```
4496 \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.

```
4497 \let\hyper@normalise\ExecuteOptions
4498 \let\ExecuteOptions\hypersetup
4499 \Hy@RestoreCatcodes
4500 \InputIfFileExists{hyperref.cfg}{\fi}{\fi}
4501 \Hy@SetCatcodes
4502 \let\ExecuteOptions\hyper@normalise
4503 \ifx\Hy@MaybeStopNow\relax
4504 \else
4505   \Hy@stoppedearlytrue
4506   \expandafter\Hy@MaybeStopNow
4507 \fi
4508 \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.

```
4509 \SetupKeyvalOptions{family=Hyp}
4510 \DeclareLocalOptions{%
4511   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4512 }
```

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

```
4513 \@ifpackagewith{hyperref}{tex4ht}{\%
4514 }{\%
4515   \@ifpackageloaded{tex4ht}{\%
4516     \PassOptionsToPackage{tex4ht}{hyperref}%
4517   }{\%
4518     \ltx@ifundefined{HCode}{\%
4519     }{\%
4520       \begingroup
4521       \def\Hy@pkg{tex4ht}%
4522       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4523         \def\Hy@param{#2#3}%
4524         \ifx\Hy@param\ltx@empty
4525           \expandafter\ltx@gobble
4526         \else
4527           \def\Hy@param{#3}%
4528           \ifx\Hy@param\Hy@pkg
4529             \PassOptionsToPackage{#2}{tex4ht}%
4530             \expandafter\expandafter\expandafter\@gobble
4531           \else
4532             \expandafter\expandafter\expandafter\ltx@firstofone
4533           \fi
4534         \fi
4535         {\Hy@temp@A#4\Hy@NIL}%
4536       }%
4537       \expandafter
4538       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4539     \endgroup
4540     \PassOptionsToPackage{tex4ht}{hyperref}%
4541   }%
4542 }%
4543 }
```

```
4544 \let\ReadBookmarks\relax
```

```
4545 \ProcessKeyvalOptions{Hyp}
```

After processing options.

15.1 Package xspace support

```
4546 \def\Hy@xspace@end{%
4547 \ltx@ifundefined{xspaceaddexceptions}{%
4548 \Hy@AtBeginDocument{%
4549 \ltx@ifundefined{xspaceaddexceptions}{%
4550 }{%
4551 \def\Hy@xspace@end{%
4552 \ltx@gobble{end for xspace}%
4553 }%
4554 \xspaceaddexceptions{%
4555 \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4556 }%
4557 }%
4558 }%
4559 }{%
4560 \def\Hy@xspace@end{%
4561 \ltx@gobble{end for xspace}%
4562 }%
4563 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4564 }
```

15.2 Option draft

```
4565 \Hy@AtBeginDocument{%
4566 \ifHy@draft
4567 \let\hyper@@anchor@gobble
4568 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4569 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4570 \def\hyper@anchorend{\Hy@xspace@end}%
4571 \let\hyper@linkstart@gobbletwo
4572 \def\hyper@linkend{\Hy@xspace@end}%
4573 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4574 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4575 \def\hyper@link@[#1]#2#3#4{#4\Hy@xspace@end}%
4576 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4577 \let\PDF@SetupDoc@empty
4578 \let\PDF@FinishDoc@empty
4579 \let\@fifthoffive\@secondoftwo
4580 \let\@secondoffive\@secondoftwo
4581 \let\ReadBookmarks\relax
4582 \let\WriteBookmarks\relax
4583 \Hy@WarningNoLine{Draft mode on}%
4584 \fi
4585 \Hy@DisableOption{draft}%
4586 \Hy@DisableOption{nolinks}%
4587 \Hy@DisableOption{final}%
4588 }
```

15.3 PDF/A

```
4589 \Hy@DisableOption{pdfa}
4590 \ifHy@pdfa
4591 \kvsetkeys{Hyp}{pdfversion=1.4}%
4592 \Hy@DisableOption{pdfversion}%

```

```

4593 \def\Hy@Acrobatmenu#1#2{%
4594   \leavevmode
4595   \begingroup
4596   \edef\x{#1}%
4597   \@onelevel@sanitize\x
4598   \ifx\x\Hy@NextPage
4599     \let\y=Y%
4600   \else
4601     \ifx\x\Hy@PrevPage
4602       \let\y=Y%
4603     \else
4604       \ifx\x\Hy@FirstPage
4605         \let\y=Y%
4606       \else
4607         \ifx\x\Hy@LastPage
4608           \let\y=Y%
4609         \else
4610           \let\y=N%
4611         \fi
4612       \fi
4613     \fi
4614   \fi
4615   \expandafter\endgroup
4616   \ifx\y Y%
4617   \else
4618     \Hy@Error{%
4619       PDF/A: Named action `#1' is not permitted%
4620     }\@ehc
4621     {#2}%
4622     \expandafter\@gobble
4623   \fi
4624 }%
4625 \def\Hy@temp#1{%
4626   \expandafter\def\csname Hy@#1\endcsname{#1}%
4627   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4628 }%
4629 \Hy@temp{NextPage}%
4630 \Hy@temp{PrevPage}%
4631 \Hy@temp{FirstPage}%
4632 \Hy@temp{LastPage}%
4633 \else
4634 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4635 \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.

```

4636 \Hy@nextfalse
4637 \ltx@ifundefined{spanish@sh@}{\Hy@nexttrue}
4638 \ltx@ifundefined{galician@sh@}{\Hy@nexttrue}
4639 \ltx@ifundefined{estonian@sh@}{\Hy@nexttrue}
4640 \ifHy@next
4641   \let\texttilde\~%
4642 \fi
4643 \def\Hy@wrapper@babel#1#2{%

```



```

4644 \begingroup
4645 \Hy@safe@activetrue
4646 \set@display@protect
4647 \edef\x{#2}%
4648 \@onelevel@sanitize\x
4649 \toks@{#1}%
4650 \edef\x{\endgroup\the\toks@{\x}}%
4651 \x
4652 }
4653 \def\Hy@WrapperDef#1{%
4654 \begingroup
4655 \escapechar=\m@ne
4656 \xdef\Hy@gtemp{%
4657 \expandafter\noexpand\csname HyWrap@string#1\endcsname
4658 }%
4659 \endgroup
4660 \edef#1{%
4661 \noexpand\Hy@wrapper@babel
4662 \expandafter\noexpand\Hy@gtemp
4663 }%
4664 \expandafter\def\Hy@gtemp
4665 }

4666 \ifHy@hyperfigures
4667 \Hy@Info{Hyper figures ON}%
4668 \else
4669 \Hy@Info{Hyper figures OFF}%
4670 \fi
4671 \ifHy@nesting
4672 \Hy@Info{Link nesting ON}%
4673 \else
4674 \Hy@Info{Link nesting OFF}%
4675 \fi
4676 \ifHy@hyperindex
4677 \Hy@Info{Hyper index ON}%
4678 \else
4679 \Hy@Info{Hyper index OFF}%
4680 \fi
4681 \ifHy@plainpages
4682 \Hy@Info{Plain pages ON}%
4683 \else
4684 \Hy@Info{Plain pages OFF}%
4685 \fi
4686 \ifHy@backref
4687 \Hy@Info{Backreferencing ON}%
4688 \else
4689 \Hy@Info{Backreferencing OFF}%
4690 \fi
4691 \ifHy@typexml
4692 \Hy@AtEndOfPackage{%
4693 \RequirePackage{color}%
4694 \RequirePackage{nameref}[2012/07/28]%
4695 }%
4696 \fi
4697 \Hy@DisableOption{typexml}
4698 \ifHy@implicit
4699 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4700 \else

```

```

4701 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4702 \def\MaybeStopEarly{%
4703   \Hy@Message{Stopped early}%
4704   \Hy@AtBeginDocument{%
4705     \PDF@FinishDoc
4706     \gdef\PDF@FinishDoc{}}%
4707   }%
4708   \endinput
4709 }%
4710 \Hy@AtBeginDocument{%
4711   \let\autoref\ref
4712   \let\autopageref\pageref
4713   \ifx\@pdfpagemode\@empty
4714     \gdef\@pdfpagemode{UseNone}%
4715   \fi
4716   \global\Hy@backreffalse
4717 }%
4718 \Hy@AtEndOfPackage{%
4719   \global\let\ReadBookmarks\relax
4720   \global\let\WriteBookmarks\relax
4721 }%
4722 \fi
4723 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4724 \Hy@AtEndOfPackage{%
4725   \@ifpackageloaded{tex4ht}{%
4726     \def\Hy@driver{htex4ht}%
4727     \Hy@texhttrue
4728   }{}%

```

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.

```

4729   \ifx\Hy@driver\@empty
4730   \else
4731     \ifx\pdfextension\@undefined
4732       \def\Hy@temp{hpdfTeX}%
4733     \else
4734       \def\Hy@temp{hluatex}%
4735     \fi
4736   \ifpdf
4737     \ifx\Hy@driver\Hy@temp
4738     \else
4739       \Hy@WarningNoLine{%
4740         Wrong driver `\'Hy@driver.def';\MessageBreak
4741         pdfTeX is running in PDF mode.\MessageBreak
4742         Forcing driver `\'Hy@temp.def'%
4743       }%
4744       \let\Hy@driver\Hy@temp
4745     \fi
4746   \else
4747     \ifx\Hy@driver\Hy@temp
4748     \Hy@WarningNoLine{%
4749       Wrong driver `\'Hy@driver.def';\MessageBreak
4750       pdfTeX is not running in PDF mode.\MessageBreak
4751       Using default driver%
4752     }%

```

```

4753     \let\Hy@driver\@empty
4754     \fi
4755   \fi
4756 \fi
4757 \ifHy@texht
4758 \else
4759   \ifx\Hy@driver\@empty
4760   \else
4761     \def\Hy@temp{hxtex}%
4762     \ifxetex
4763       \ifx\Hy@driver\Hy@temp
4764       \else
4765         \Hy@WarningNoLine{%
4766           Wrong driver ``\Hy@driver.def';\MessageBreak
4767           XeTeX is running.\MessageBreak
4768           Forcing driver ``\Hy@temp.def' for XeTeX%
4769         }%
4770       \let\Hy@driver\Hy@temp
4771     \fi
4772   \fi
4773 \fi
4774 \fi
4775 \ifx\Hy@driver\@empty
4776 \else
4777   \def\Hy@temp{hvtexhtm}%
4778   \ifvtexhtml
4779     \ifx\Hy@driver\Hy@temp
4780     \else
4781       \Hy@WarningNoLine{%
4782         Wrong driver ``\Hy@driver.def';\MessageBreak
4783         VTeX is running in HTML mode.\MessageBreak
4784         Forcing driver ``\Hy@temp.def'%
4785       }%
4786     \let\Hy@driver\Hy@temp
4787   \fi
4788 \else
4789   \ifx\Hy@driver\Hy@temp
4790   \Hy@WarningNoLine{%
4791     Wrong driver ``\Hy@driver.def';\MessageBreak
4792     VTeX is not running in HTML mode.\MessageBreak
4793     Using default driver%
4794   }%
4795   \let\Hy@driver\@empty
4796 \fi
4797 \fi
4798 \fi

```

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

```

4799 \let\HyOpt@DriverType\ltx@empty
4800 \ifx\HyOpt@CustomDriver\ltx@empty
4801   \ifx\Hy@driver\@empty
4802     \def\HyOpt@DriverType{ (autodetected)}%
4803     \providecommand*{\Hy@defaultdriver}{hypertex}%
4804     \ifpdf
4805       \ifx\pdfextension\@undefined
4806       \def\Hy@driver{hpdfTeX}%
4807     \else
4808       \def\Hy@driver{hluatex}%

```

```

4809     \fi
4810   \else
4811     \ifxetex
4812       \def\Hy@driver{hxdetex}%
4813     \else
4814       \ifvtexhtml
4815         \def\Hy@driver{hvtexhtm}%
4816       \def\MaybeStopEarly{%
4817         \Hy@Message{Stopped early}%
4818         \Hy@AtBeginDocument{%
4819           \PDF@FinishDoc
4820           \gdef\PDF@FinishDoc{}}%
4821       }%
4822       \endinput
4823     }%
4824   \else
4825     \ifvtexpdf
4826       \def\Hy@driver{hvtex}%
4827     \else
4828       \ifvtexps
4829         \def\Hy@driver{hvtex}%
4830       \else
4831         \ifx\HyOpt@DriverFallback\ltx@empty
4832           \let\Hy@driver\Hy@defaultdriver
4833         \def\HyOpt@DriverType{ (default)}%
4834       \else
4835         \begingroup
4836           \toks@{\expandafter{\HyOpt@DriverFallback}%
4837           \edef\x{\endgroup
4838             \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4839           }%
4840         \x
4841         \ifx\Hy@driver\ltx@empty
4842           \let\Hy@driver\Hy@defaultdriver
4843         \def\HyOpt@DriverType{ (default)}%
4844       \else
4845         \def\HyOpt@DriverType{ (fallback)}%
4846       \fi
4847     \fi
4848   \fi
4849 \fi
4850 \fi
4851 \fi
4852 \fi
4853 \ifx\Hy@driver\Hy@defaultdriver
4854   \def\Hy@temp{hdwind}%
4855   \ifx\Hy@temp\Hy@driver
4856     \kvsetkeys{Hyp}{colorlinks}%
4857     \PassOptionsToPackage{dwindo}{color}%
4858   \fi
4859 \fi
4860 \fi
4861 \else
4862   \def\HyOpt@DriverType{ (custom)}%
4863   \let\Hy@driver\HyOpt@CustomDriver
4864 \fi
4865 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%

```

```

4866 \chardef\Hy@VersionChecked=0 %
4867 \input{\Hy@driver.def}%
4868 \ifcase\Hy@VersionChecked
4869   \Hy@VersionCheck{\Hy@driver.def}%
4870 \fi
4871 \let\@unprocessedoptions\relax
4872 \Hy@RestoreCatcodes
4873 \Hy@DisableOption{tex4ht}%
4874 \Hy@DisableOption{pdftex}%
4875 \Hy@DisableOption{nativepdf}%
4876 \Hy@DisableOption{dvipdfm}%
4877 \Hy@DisableOption{dvipdfmx}%
4878 \Hy@DisableOption{dvipdfmx-outline-open}%
4879 \Hy@DisableOption{pdfmark}%
4880 \Hy@DisableOption{dvips}%
4881 \Hy@DisableOption{hypertex}%
4882 \Hy@DisableOption{vtex}%
4883 \Hy@DisableOption{vtexpdfmark}%
4884 \Hy@DisableOption{dviwindo}%
4885 \Hy@DisableOption{dvipsone}%
4886 \Hy@DisableOption{textures}%
4887 \Hy@DisableOption{latex2html}%
4888 \Hy@DisableOption{ps2pdf}%
4889 \Hy@DisableOption{xetex}%
4890 \Hy@DisableOption{driverfallback}%
4891 \Hy@DisableOption{customdriver}%
4892 \Hy@DisableOption{pdfversion}%
4893 }

```

Support for open outlines is enabled for XeTeX ≥ 0.9995 . I don't know, if older versions also support this. AFAIK older dvipdfmx versions will break, thus the switch cannot be turned on by default.

```

4894 \newif\ifHy@DvipdfmxOutlineOpen
4895 \ifxetex
4896   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4897   \else
4898     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4899     \Hy@DvipdfmxOutlineOpenttrue
4900   \fi
4901 \fi
4902 \begingroup\expandafter\expandafter\expandafter\endgroup
4903 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4904 \else
4905   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4906     \Hy@DvipdfmxOutlineOpenttrue
4907   \fi
4908 \fi

```

15.4.2 Bookmarks

```

4909 \def\WriteBookmarks{0}
4910 \def\@bookmarkopenstatus#1{%
4911   \ifHy@bookmarksopen

```

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

```

4912   \ifnum#1<\expandafter\@firstofone\expandafter
4913     {\number\@bookmarkopenlevel} % explicit space
4914   \else

```

```

4915     -%
4916     \fi
4917 \else
4918     -%
4919     \fi
4920 }
4921 \ifHy@bookmarks
4922 \Hy@Info{Bookmarks ON}%
4923 \ifx\@pdfpagemode\@empty
4924 \def\@pdfpagemode{UseOutlines}%
4925 \fi
4926 \else
4927 \let\@bookmarkopenstatus\ltx@gobble
4928 \Hy@Info{Bookmarks OFF}%
4929 \Hy@AtEndOfPackage{%
4930 \global\let\ReadBookmarks\relax
4931 \global\let\WriteBookmarks\relax
4932 }%
4933 \ifx\@pdfpagemode\@empty
4934 \def\@pdfpagemode{UseNone}%
4935 \fi
4936 \fi
4937 \Hy@DisableOption{bookmarks}

    Add wrapper for setting standard catcodes (babel's shorthands).
4938 \def\Hy@CatcodeWrapper#1{%
4939 \let\Hy@endWrap\ltx@empty
4940 \def\TMP@EnsureCode##1##2{%
4941 \edef\Hy@endWrap{%
4942 \Hy@endWrap
4943 \catcode##1 \the\catcode##1\relax
4944 }%
4945 \catcode##1 ##2\relax
4946 }%
4947 \TMP@EnsureCode{10}{12}% ^^J
4948 \TMP@EnsureCode{33}{12}% !
4949 \TMP@EnsureCode{34}{12}% "
4950 \TMP@EnsureCode{36}{3}% $ (math)
4951 \TMP@EnsureCode{38}{4}% & (alignment)
4952 \TMP@EnsureCode{39}{12}% '
4953 \TMP@EnsureCode{40}{12}% (
4954 \TMP@EnsureCode{41}{12}% )
4955 \TMP@EnsureCode{42}{12}% *
4956 \TMP@EnsureCode{43}{12}% +
4957 \TMP@EnsureCode{44}{12}% ,
4958 \TMP@EnsureCode{45}{12}% -
4959 \TMP@EnsureCode{46}{12}% .
4960 \TMP@EnsureCode{47}{12}% /
4961 \TMP@EnsureCode{58}{12}% :
4962 \TMP@EnsureCode{59}{12}% ;
4963 \TMP@EnsureCode{60}{12}% <
4964 \TMP@EnsureCode{61}{12}% =
4965 \TMP@EnsureCode{62}{12}% >
4966 \TMP@EnsureCode{63}{12}% ?
4967 \TMP@EnsureCode{91}{12}% [
4968 \TMP@EnsureCode{93}{12}% ]
4969 \TMP@EnsureCode{94}{7}% ^ (superscript)
4970 \TMP@EnsureCode{95}{8}% _ (subscript)

```

```

4971 \TMP@EnsureCode{96}{12}% `
4972 \TMP@EnsureCode{124}{12}% |
4973 \TMP@EnsureCode{126}{13}% ~ (active)
4974 #1\relax
4975 \Hy@EndWrap
4976 }

```

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

```

4977 \Hy@AtBeginDocument{%
4978   \ifHy@ocgcolorlinks
4979     \kvsetkeys{Hyp}{colorlinks}%
4980     \ifHy@pdfa
4981       \Hy@Warning{%
4982         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4983         using `colorlinks' instead of `ocgcolorlinks'%
4984       }%
4985       \Hy@ocgcolorlinksfalse
4986     \fi
4987   \fi
4988   \ifHy@ocgcolorlinks
4989   \else
4990     \Hy@DisableOption{ocgcolorlinks}%
4991   \fi
4992   \ifHy@colorlinks
4993     \def\@pdfborder{0 0 0}%
4994     \let\@pdfborderstyle\@empty
4995     \ifHy@typexml
4996     \else
4997       \Hy@CatcodeWrapper{%
4998         \RequirePackage{color}%
4999       }%
5000     \fi
5001     \def\Hy@colorlink#1{%
5002       \begingroup
5003       \HyColor@UseColor#1%
5004     }%
5005     \def\Hy@endcolorlink{\endgroup}%
5006     \Hy@Info{Link coloring ON}%
5007   \else
5008     \ifHy@frenchlinks
5009     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
5010     \def\Hy@endcolorlink{\endgroup}%
5011     \Hy@Info{French linking ON}%
5012   \else

```

for grouping consistency:

```

5013   \def\Hy@colorlink#1{\begingroup}%
5014   \def\Hy@endcolorlink{\endgroup}%
5015   \Hy@Info{Link coloring OFF}%
5016   \fi
5017 \fi
5018 \Hy@DisableOption{colorlinks}%
5019 \Hy@DisableOption{frenchlinks}%
5020 \ifHy@texht
5021   \long\def\@firstoffive#1#2#3#4#5{#1}%
5022   \long\def\@secondoffive#1#2#3#4#5{#2}%
5023   \long\def\@thirdoffive#1#2#3#4#5{#3}%
5024   \long\def\@fourthoffive#1#2#3#4#5{#4}%

```

```

5025 \long\def\@fifthoffive#1#2#3#4#5{#5}%
5026 \providecommand*\@safe@activetrue{}%
5027 \providecommand*\@safe@activesfalse{}%
5028 \def\T@ref#1{%
5029   \Hy@safe@activetrue
5030   \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5031   \Hy@safe@activesfalse
5032 }%
5033 \def\T@pageref#1{%
5034   \Hy@safe@activetrue
5035   \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5036   \Hy@safe@activesfalse
5037 }%
5038 \else
5039   \ifHy@typexml
5040   \else
5041     \Hy@CatcodeWrapper{%
5042       \RequirePackage{nameref}[2012/07/28]%
5043     }%
5044   \fi
5045 \fi
5046 \DeclareRobustCommand\ref{%
5047   \@ifstar\@refstar\T@ref
5048 }%
5049 \DeclareRobustCommand\pageref{%
5050   \@ifstar\@pagerefstar\T@pageref
5051 }%
5052 % \@ifclassloaded{memoir}{%
5053 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
5054 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
5055 %   }%
5056 % } \ltx@secondoftwo
5057 % {%
5058 %   \DeclareRobustCommand*\@nameref{%
5059 %     \@ifstar\@mem@titlerefno link\@mem@titleref
5060 %   }%
5061 % }{%
5062   \DeclareRobustCommand*\@nameref{%
5063     \@ifstar\@namerefstar\T@nameref
5064   }%
5065 % }%
5066 }
5067 \Hy@AtBeginDocument{%
5068   \ifHy@texht
5069   \else
5070     \Hy@CatcodeWrapper\ReadBookmarks
5071   \fi
5072 }
5073 \ifHy@backref
5074   \RequirePackage{backref}%
5075 \else
5076   \let\Hy@backout\@gobble
5077 \fi
5078 \Hy@DisableOption{backref}
5079 \Hy@DisableOption{pagebackref}
5080 \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.

```

5081 \begingroup
5082 \endlinechar=-1 %
5083 \catcode\^^A=14 %
5084 \catcode\^^M\active
5085 \catcode\%\active
5086 \catcode\#\active
5087 \catcode\_ \active
5088 \catcode\$ \active
5089 \catcode\& \active
5090 \gdef\hyper@normalise{^^A
5091   \begingroup
5092   \catcode\^^M\active
5093   \def^^M{ }^^A
5094   \catcode\%\active
5095   \let%\@percentchar
5096   \let\_ \textunderscore
5097   \catcode\#\active
5098   \def#{\hyper@hash}^^A
5099   \def#{\hyper@hash}^^A
5100   \@makeother\&^^A
5101   \edef&{\string&}^^A
5102   \edef&{\string&}^^A
5103   \edef\textunderscore{\string_}^^A
5104   \let\_ \textunderscore
5105   \catcode\_ \active
5106   \let\_ \textunderscore
5107   \let~\hyper@tilde
5108   \let~\hyper@tilde
5109   \let\textasciitilde\hyper@tilde
5110   \let\\\@backslashchar
5111   \edef$\string$}^^A
5112   \Hy@safe@activetrue
5113   \hyper@n@rmalise
5114 }^^A
5115 \catcode\#=6 ^^A
5116 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5117 \gdef\hyper@n@rmalise#1#2{^^A
5118   \def\Hy@tempa{#2}^^A
5119   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5120     \ltx@ReturnAfterElseFi{^^A
5121       \hyper@@normalise{#1}^^A
5122     }^^A
5123   \else
5124     \ltx@ReturnAfterFi{^^A
5125       \hyper@@normalise{#1}{#2}^^A
5126     }^^A
5127   \fi
5128 }^^A

```

```

5129 \gdef\hyper@@normalise#1#2{^^A
5130 \edef\Hy@tempa{^^A
5131 \endgroup
5132 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
5133 }^^A
5134 \Hy@tempa
5135 }^^A
5136 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
5137 #1^^A
5138 \ifx\limits#2\limits
5139 \else
5140 \ltx@ReturnAfterFi{^^A
5141 \Hy@RemovePercentCr #2\@nil
5142 }^^A
5143 \fi
5144 }^^A
5145 \endgroup
5146 \providecommand*\hyper@chars{%
5147 \let\#\hyper@hash
5148 \let\%\@percentchar
5149 \Hy@safe@activestrue
5150 }

5151 \def\hyperlink#1#2{%
5152 \hyper@@link{}{#1}{#2}%
5153 }

5154 \def\Hy@VerboseLinkStart#1#2{%
5155 \ifHy@verbose
5156 \begingroup
5157 \Hy@safe@activestrue
5158 \xdef\Hy@VerboseGlobalTemp{(#1) `#2'}%
5159 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
5160 \xdef\Hy@VerboseGlobalTemp{%
5161 \Hy@VerboseGlobalTemp, %
5162 line \the\inputlineno
5163 }%
5164 \endgroup
5165 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5166 \@onelevel@sanitize\Hy@VerboseLinkInfo
5167 \fi
5168 }

5169 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5170 \def\Hy@VerboseLinkStop{%
5171 \ifHy@verbose
5172 \begingroup
5173 \edef\x{\endgroup
5174 \write\m@ne{%
5175 Package `hyperref' Info: %
5176 End of reference \Hy@VerboseLinkInfo.%
5177 }%
5178 }%
5179 \x
5180 \fi
5181 }

5182 \def\Hy@VerboseAnchor#1{%
5183 \ifHy@verbose
5184 \begingroup

```

```

5185 \Hy@safe@activetrue
5186 \Hy@Info{Anchor ``\HyperDestNameFilter{#1}'}{%
5187 \endgroup
5188 \fi
5189 }

5190 \def\Hy@AllowHyphens{%
5191 \relax
5192 \ifhmode
5193 \penalty\@M
5194 \hskip\z@skip
5195 \fi
5196 }

5197 \DeclareRobustCommand*{\href}[1][]{%
5198 \begingroup
5199 \setkeys{href}{#1}%
5200 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
5201 }
5202 \def\Hy@href#-{%
5203 \hyper@normalise\href@
5204 }
5205 \begingroup
5206 \catcode`\$=6 %
5207 \catcode`\#=12 %
5208 \gdef\href@\$1{\expandafter\href@split$1##\}%
5209 \gdef\href@split$1##$2##$3\\$4{%
5210 \hyper@@link{$1}{$2}{$3}{$4}%
5211 \endgroup
5212 }%
5213 \endgroup

```

Option ‘page’.

```

5214 \define@key{href}{page}{%
5215 \def\Hy@href@page{#1}%
5216 }
5217 \let\Hy@href@page\@empty
5218 \newcount\c@Hy@tempcnt
5219 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5220 \def\Hy@MakeRemoteAction{%
5221 \ifx\Hy@href@page\@empty
5222 \def\Hy@href@page{0}%
5223 \else
5224 \setcounter{Hy@tempcnt}{\Hy@href@page}%
5225 \ifnum\c@Hy@tempcnt<\@ne
5226 \Hy@Warning{%
5227 Invalid page number (\theHy@tempcnt)\MessageBreak
5228 for remote PDF file.\MessageBreak
5229 Using page 1%
5230 }%
5231 \def\Hy@href@page{0}%
5232 \else
5233 \global\advance\c@Hy@tempcnt\m@ne
5234 \edef\Hy@href@page{\theHy@tempcnt}%
5235 \fi
5236 \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.

```

5237 \ifx\Hy@href@nextactionraw\@empty
5238 \else
5239 \Hy@pdfnewwindowsettrue
5240 \Hy@pdfnewwindowtrue
5241 \fi
5242 }

```

Option ‘pdfremotestartview’.

```

5243 \define@key{href}{pdfremotestartview}{%
5244 \setkeys{Hyp}{pdfremotestartview={#1}}}%
5245 }

```

Option ‘pdfnewwindow’.

```

5246 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5247 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5248 \newif\ifHy@href@ismap
5249 \define@key{href}{ismap}[true]{%
5250 \ltx@ifundefined{Hy@href@ismap#1}{%
5251 \Hy@Error{%
5252 Invalid value (#1) for key `ismap'.\MessageBreak
5253 Permitted values are `true' or `false'.\MessageBreak
5254 Ignoring `ismap'%
5255 }%\ehc
5256 }{%
5257 \csname Hy@href@ismap#1\endcsname
5258 }%
5259 }

```

Option ‘nextactionraw’.

```

5260 \let\Hy@href@nextactionraw\@empty
5261 \define@key{href}{nextactionraw}{%
5262 \edef\Hy@href@nextactionraw{#1}%
5263 \ifx\Hy@href@nextactionraw\@empty
5264 \else
5265 \Hy@Match\Hy@href@nextactionraw{}{%
5266 ~(\HyPat@ObjRef/|<.*[/S[/|. +>>|)%
5267 \[( ?\HyPat@ObjRef/|<.*[/S[/|. +>>)+ ?)]$%
5268 }{}{%
5269 \Hy@Warning{Invalid value for `nextactionraw':\MessageBreak
5270 \Hy@href@nextactionraw\MessageBreak
5271 The action is discarded%
5272 }%
5273 }%
5274 \ifx\Hy@href@nextactionraw\@empty
5275 \else
5276 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5277 \fi
5278 \fi
5279 }
5280 \def\HyPat@ObjRef/{.+}

```

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

```

5281 \RequirePackage{url}
5282 \let\HyOrg@url\url
5283 \def\Hurl{\begingroup \Url}
5284 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
5285 \def\nolinkurl@#1{\Hurl{#1}}

```

```

5286 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
5287 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

5288 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
5289 \providecommand\hyper@image[2]{#2}

5290 \def\hypertarget#1#2{%
5291   \ifHy@nesting
5292     \hyper@@anchor{#1}{#2}%
5293   \else
5294     \hyper@@anchor{#1}{\relax}#2%
5295   \fi
5296 }

```

`\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.

```

5297 \DeclareRobustCommand*{\hyperref}{%
5298   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5299 }
5300 \def\Hy@babelnormalise#1[#2]{%
5301   \begingroup
5302     \Hy@safe@activestruer
5303     \edef\Hy@tempa{%
5304       \endgroup
5305       \noexpand#1[#2]}%
5306   }%
5307   \Hy@tempa
5308 }
5309 \def\@hyperref{\hyper@normalise\@hyperref}
5310 \def\@hyperref#1#2#3{%
5311   \edef\ref@one{\ifx\\#2\\else#2.\fi#3}%
5312   \expandafter\tryhyper@link\ref@one\{#1}%
5313 }
5314 \def\tryhyper@link#1\\#2{%
5315   \hyper@@link{#2}{#1}%
5316 }

5317 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
5318 \def\@hyperdef#1#2#3{%, category, name, text
5319   \ifx\\#1\\%
5320     \def\Hy@AnchorName{#2}%
5321   \else
5322     \def\Hy@AnchorName{#1.#2}%
5323   \fi
5324   \ifHy@nesting
5325     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5326   \else
5327     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5328   \fi
5329 }

```

We also have a need to give a \LaTeX *label* to a hyper reference, to ease the pain of referring to it later.

```

5330 \def\label@hyperref[#1]{%

```

```

5331 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5332 }%
5333 \def\label@@hyperref#1#2#3{%
5334   \ifx#1\relax
5335     \protect\G@refundefinedtrue
5336     \@latex@warning{%
5337       Hyper reference `#2' on page \thepage \space undefined%
5338     }%
5339     \begingroup
5340       #3%
5341     \endgroup
5342   \else
5343     \hyper@@link{\expandafter\@fifthoffive#1}%
5344     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5345   \fi
5346 }
5347 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5348                               % anchor text
5349   \@bsphack
5350   \ifx\\#2\\%
5351     \def\Hy@AnchorName{#3}%
5352   \else
5353     \def\Hy@AnchorName{#2.#3}%
5354   \fi
5355   \if@filesw
5356     \protected@write\@auxout{}{%
5357       \string\newlabel{#1}{#2}{#3}{\Hy@AnchorName}{#4}%
5358     }%
5359   \fi
5360   \@esphack
5361   \ifHy@nesting
5362     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5363   \else
5364     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5365   \fi
5366 }

```

16.1 Link box support for XeTeX

```

5367 \newdimen\XeTeXLinkMargin
5368 \setlength{\XeTeXLinkMargin}{2pt}
5369 \ifxetex
5370   \font\XeTeXLink@font=pzdr at 1sp\relax
5371   \newcommand*\XeTeXLink@space{%
5372     \begingroup
5373       \XeTeXLink@font
5374       \@xxxii
5375     \endgroup
5376   }%
5377   \newcommand{\XeTeXLinkBox}[1]{%
5378     \begingroup
5379       \leavevmode
5380       \sbox\z@{#1}%
5381       \begingroup
5382         \dimen@=\dp\z@
5383         \advance\dimen@\XeTeXLinkMargin
5384         \setbox\tw@=\llap{%

```

```

5385      \hb@xt@\XeTeXLinkMargin{%
5386      \lower\dimen@\hbox{\XeTeXLink@space}%
5387      \hss
5388      }%
5389      }%
5390      \dp\tw@=\dp\z@
5391      \ht\tw@=\ht\z@
5392      \copy\tw@
5393      \endgroup
5394      \copy\z@
5395      \dimen@=\ht\z@
5396      \advance\dimen@\XeTeXLinkMargin
5397      \setbox\tw@=\rlap{%
5398      \hb@xt@\XeTeXLinkMargin{%
5399      \hss
5400      \raise\dimen@\hbox{\XeTeXLink@space}%
5401      }%
5402      }%
5403      \dp\tw@=\dp\z@
5404      \ht\tw@=\ht\z@
5405      \copy\tw@
5406      \endgroup
5407      }%
5408      \else
5409      \newcommand*\XeTeXLinkBox}[1]{%
5410      \begingroup
5411      \leavevmode
5412      \sbox\z@{#1}%
5413      \copy\z@
5414      \endgroup
5415      }%
5416      \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, it's an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

5417 \def\hyper@@link{\let\Hy@reserved@a\relax
5418 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}}%
5419 }
5420 % #1: type
5421 % #2: URL
5422 % #3: destination name
5423 % #4: text
5424 \def\hyper@link@[#1]#2#3#4{%
5425 \ltx@ifempty{#4}{% link text
5426 \Hy@Warning{Suppressing empty link}%
5427 }{%
5428 \begingroup
5429 \protected@edef\Hy@tempa{#2}%
5430 \edef\Hy@tempb{#3}%
5431 \ifx\Hy@tempa\ltx@empty
5432 \Hy@Warning{Suppressing link with empty target}%
5433 \Hy@Warning{Suppressing link with empty target}%
5434 \toks@{%

```

```

5435         \endgroup
5436         \ltx@secondoftwo
5437     }%
5438     \else
5439         \toks@{%
5440             \endgroup
5441             \hyper@link{#1}%
5442         }%
5443     \fi
5444     \else
5445         \toks@{%
5446             \endgroup
5447             \expandafter\hyper@readexternallink#2\{#1}%
5448         }%
5449     \fi
5450     \Hy@safe@activesfalse
5451     \toks@\expandafter{%
5452         \the\expandafter\toks@
5453         \expandafter{\Hy@tempb}{#4}%
5454     }%
5455     \the\toks@
5456 }%
5457 }

```

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.

```

5458 \def\hyper@readexternallink#1\{#2#3#4{%
5459     \begingroup
5460     \let\\\relax
5461     \expandafter\endgroup
5462     \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
5463 }
5464 \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.

```

5465     \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
5466 }

```

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

```

5467 \def\@pdftempwordfile{file}%
5468 \def\@pdftempwordrun{run}%
5469 \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**:

```

5470 \ifx\#6\%
5471 \@hyper@linkfile file:#7\{\#3}\{\#2}\{\#7}%
5472 \else
5473 \ifx\#4\%
5474 \@hyper@linkfile file:#7\{\#3}\{\#2}\{\#7}%
5475 \else

```

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

```

5476 \def\@pdftempa{\#4}%
5477 \ifx\@pdftempa\@pdftempwordfile
5478 \@hyper@linkfile#7\{\#3}\{\#2}\{\#7}%
5479 \else

```

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

```

5480 \ifx\@pdftempa\@pdftempwordrun
5481 \ifHy@pdfa
5482 \Hy@Error{%
5483 PDF/A: Launch action is prohibited%
5484 }\@ehc
5485 \begingroup
5486 \leavevmode
5487 #2%
5488 \endgroup
5489 \else
5490 \@hyper@launch#7\{\#3}\{\#2}%
5491 \fi
5492 \else

```

otherwise its a URL

```

5493 \hyper@linkurl{\#3}\{\#7\ifx\#2\else\hyper@hash#2\fi}%
5494 \fi
5495 \fi
5496 \fi
5497 \fi
5498 }

```

By default, turn run: into file:

```

5499 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5500 \hyper@linkurl{\#2}\%
5501 \Hy@linkfileprefix
5502 #1%
5503 \ifx\#3\%
5504 \else
5505 \hyper@hash
5506 #3%
5507 \fi
5508 }\%
5509 }

```

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

```

5510 \def\@hyper@linkfile file:#1\#2#3#4{%
5511 %file url,link string, name, original uri
5512 \filename@parse{\#1}%
5513 \ifx\filename@ext\relax

```

```

5514 \edef\filename@ext{\XR@ext}%
5515 \fi
5516 \def\use@file{\filename@area\filename@base.\filename@ext}%
5517 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
5518 \hyper@linkfile{#2}{\use@file}{#3}%
5519 }{%
5520 \ifx\@baseurl\@empty
5521 \hyper@linkurl{#2}{%
5522 #4\ifx\\#3\\else\hyper@hash#3\fi
5523 }%
5524 \else
5525 \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
5526 \fi
5527 }%
5528 }

5529 \def\Hy@ifStringEndsWith#1#2{%
5530 \begingroup
5531 \edef\x{#1}%
5532 \@onelevel@sanitize\x
5533 \edef\x{.\x}%
5534 \edef\y{#2}%
5535 \@onelevel@sanitize\y
5536 \edef\y{.\y}%
5537 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5538 \endgroup
5539 \ifx\relax##2\relax
5540 \expandafter\ltx@secondoftwo
5541 \else
5542 \expandafter\ltx@firstoftwo
5543 \fi
5544 }%
5545 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5546 }

5547 \def\Hy@StringLocalhost{localhost}
5548 \@onelevel@sanitize\Hy@StringLocalhost
5549 \def\Hy@CleanupFile#1{%
5550 \edef#1{#1}%
5551 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5552 }
5553 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5554 \begingroup
5555 \toks@{\endgroup}%
5556 \def\x{#1}%
5557 \ifx\x\@empty
5558 \def\x{#2}%
5559 \ifx\x\@empty
5560 \toks@{\endgroup\def#5{/#3}}%
5561 \else
5562 \@onelevel@sanitize\x
5563 \ifx\x\Hy@StringLocalhost
5564 \toks@{\endgroup\def#5{/#3}}%
5565 \fi
5566 \fi
5567 \fi
5568 \the\toks@
5569 }

```

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.

```

5570 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5571 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5572   \ifx\#1\%
5573     #2\Hy@Warning{Ignoring empty anchor}%
5574   \else
5575     \def\anchor@spot{#2#3}%
5576     \let\put@me@back\@empty
5577     \ifx\relax#2\relax
5578     \else
5579       \ifHy@nesting
5580       \else
5581         \ifcat a\noexpand#2\relax
5582         \else
5583           \ifcat 0\noexpand#2 \relax
5584           \else
5585             \typeout{Anchor start is not alphanumeric %
5586               on input line\the\inputlineno%
5587             }%
5588             \let\anchor@spot\@empty
5589             \def\put@me@back{#2#3}%
5590           \fi
5591         \fi
5592       \fi
5593     \fi
5594     \ifHy@activeanchor
5595     \anchor@spot
5596   \else
5597     \hyper@anchor{#1}%
5598   \fi
5599   \expandafter\put@me@back
5600 \fi
5601 \let\anchor@spot\@empty
5602 }
5603 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5604 \ifHy@destlabel

\hyper@newdestlabel

5605 \def\hyper@newdestlabel#1#2{%
5606   \begingroup
5607   \Hy@safe@activetrue
5608   \edef\x{\endgroup
5609     \noexpand\@newl@bel{HyDL}{#1}{#2}%
5610   }%
5611   \x
5612 }%

```

\hyper@destlabel@hook

```
5613 \providecommand*\hyper@destlabel@hook}{}%
```

\Hy@DestRename

```
5614 \newcommand*\Hy@DestRename}[2]{%
5615   \ltx@ifundefined{HyDL!#1}{%
5616     \begingroup
5617       \Hy@safe@activestruer
5618       \edef\dest@name{#1}%
5619       \edef\label@name{#2}%
5620       \hyper@destlabel@hook
5621       \Hy@IsNotEmpty{dest@name}{%
5622         \Hy@IsNotEmpty{label@name}{%
5623           \global\expandafter
5624             \let\csname HyDL!#1\endcsname\ltx@empty
5625           \if@files
5626             \protected@write\@auxout{}{%
5627               \string\hyper@newdestlabel
5628                 {#1}%
5629                 {\label@name}%
5630             }%
5631           \fi
5632         }%
5633       }%
5634     \endgroup
5635   }}%
5636 }%
```

\HyperDestRename

```
5637 \newcommand*\HyperDestRename}[2]{%
5638   \AtBeginDocument{%
5639     \Hy@DestRename{#1}{#2}%
5640   }%
5641 }%
5642 \AtBeginDocument{%
5643   \let\HyperDestRename\Hy@DestRename
5644 }%
```

\Hy@IsNotEmpty

```
5645 \def\Hy@IsNotEmpty#1{%
5646   \ltx@ifundefined{#1}\ltx@gobble{%
5647     \expandafter\ifx\csname#1\endcsname\ltx@empty
5648     \expandafter\ltx@gobble
5649   \else
5650     \expandafter\ltx@firstofone
5651   \fi
5652 }%
5653 }%

5654 \ltx@GlobalAppendToMacro\label@hook{%
5655   \HyperDestRename\@currentHref\label@name
5656 }%
```

\HyperDestLabelReplace

```
5657 \def\HyperDestLabelReplace#1{%
5658   \ltx@ifundefined{HyDL@#1}{%
5659     #1%
```

```

5660 }{%
5661   \csname HyDL@#1\endcsname
5662 }%
5663 }%

```

`\HyperDestNameFilter`

```

5664 \let\HyperDestNameFilter\HyperDestLabelReplace

5665 \else

```

`\hyper@newdestlabel`

```

5666 \let\hyper@newdestlabel\ltx@gobbletwo

```

`\HyperDestLabelReplace`

```

5667 \let\HyperDestLabelReplace\ltx@firstofone

```

`\HyperDestRename`

`@gobbletwo`

```

5668 \fi
5669 \Hy@DisableOption{destlabel}

```

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

```

5670 \AddLineBeginAux{%
5671   \string\providecommand\string\hyper@newdestlabel[2]{}%
5672 }

```

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.

```

5673 \let\htmladding\hyperimage

5674 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5675 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5676 \def\htmlref#1#2{% anchor text, label
5677   \label@hyperref[{#2}]{#1}%
5678 }

```

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.

```

5679 \def\@@latextohtmlX{%
5680   \let\hhyperref\hyperref
5681   \def\hyperref##1##2##3##4{% anchor text for HTML
5682     % text to print before label in print
5683     % label
5684     % post-label text in print
5685     ##2\ref{##4}##3%
5686   }%
5687 }

```

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.

```
5688 \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

```
5689 \def\HyField@NewFlag#1#2{%
5690   \lowercase{\HyField@NewOption{#2}}%
5691   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5692 }
```

\HyField@NewFlagOnly

```
5693 \def\HyField@NewFlagOnly#1#2{%
5694   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5695 }
```

\HyField@NewOption #1: option name

```
5696 \def\HyField@NewOption#1{%
5697   \expandafter\newif\csname ifFld@#1\endcsname
5698   \define@key{Field}{#1}[true]{%
5699     \lowercase{\Field@boolkey{##1}}{#1}%
5700   }%
5701 }
```

\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

```
5702 \def\HyField@NewBitsetFlag#1#2#3#4{%
5703   \begingroup
5704     \count@=#4\relax
5705     \advance\count@\m@ne
5706     \def\x##1{%
5707       \endgroup
5708       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5709       \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5710         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5711           (\number#4) #2%
5712         }%
5713       \fi
5714     }%
5715   \endgroup
5716 }
```

```

5713     \else
5714         \expandafter\edef\csname HyField@#3@##1\endcsname{%
5715             \csname HyField@#3@##1\endcsname
5716             /#2%
5717         }%
5718     \fi
5719 }%
5720 \expandafter\x\expandafter{\the\count@}%
5721 }

\HyField@UseFlag The bit set is HyField@#1
5722 \def\HyField@UseFlag#1#2{%
5723     \lowercase{\HyField@@UseFlag{#2}}{#1}%
5724 }

\HyField@@UseFlag
5725 \def\HyField@@UseFlag#1#2{%
5726     \bitsetSetValue{HyField@#2}{%
5727         \csname HyField@#2@#1\endcsname
5728     }{%
5729         \csname ifFld@#1\endcsname 1\else 0\fi
5730     }%
5731 }

\HyField@SetFlag The bit set is HyField@#1
5732 \def\HyField@SetFlag#1#2{%
5733     \lowercase{\HyField@@SetFlag{#2}}{#1}%
5734 }

\HyField@@SetFlag
5735 \def\HyField@@SetFlag#1#2{%
5736     \bitsetSetValue{HyField@#2}{%
5737         \csname HyField@#2@#1\endcsname
5738     }{1}%
5739 }

\HyField@PrintFlags
5740 \def\HyField@PrintFlags#1#2{%
5741     \ifHy@verbose
5742         \begingroup
5743             \let\Hy@temp\@empty
5744             \let\MessageBreak\relax
5745             \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5746             \bitsetGetSetBitList{HyField@#1}\do{%
5747                 \edef\Hy@temp{%
5748                     \Hy@temp
5749                     \csname HyField@#1@\x\endcsname\MessageBreak
5750                 }%
5751             }%
5752         \edef\x{\endgroup
5753             \noexpand\Hy@Info{%
5754                 Field flags: %
5755                 \expandafter\ifx\@car#1\@nil S\else/\fi
5756                 #1 %
5757                 \bitsetGetDec{HyField@#1} %
5758                 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5759                 \Hy@temp

```

```

5760     for #2%
5761     }%
5762   }\x
5763   \fi
5764 }

```

20.1.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5765 \HyField@NewFlag{Ff}{ReadOnly}{1}
5766 \HyField@NewFlag{Ff}{Required}{2}
5767 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5768 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5769 \HyField@NewFlag{Ff}{Radio}{16}
5770 \HyField@NewFlag{Ff}{Pushbutton}{17}
5771 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5772 \HyField@NewFlag{Ff}{Multiline}{13}
5773 \HyField@NewFlag{Ff}{Password}{14}
5774 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5775 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5776 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5777 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5778 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5779 \HyField@NewFlag{Ff}{Combo}{18}
5780 \HyField@NewFlag{Ff}{Edit}{19}
5781 \HyField@NewFlag{Ff}{Sort}{20}
5782 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5783 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5784 \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.

```

5785 \newif\ifFld@popdown
5786 \define@key{Field}{popdown}[true]{%
5787   \lowercase{\Field@boolkey{#1}}{popdown}%
5788 }

```

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.

```

5789 \HyField@NewFlag{F}{Invisible}{1}
5790 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5791 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5792 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5793 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5794 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5795 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5796 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5797 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

```



```

5798 \ifHy@pdfa
5799 \def\HyField@PDFAFlagWarning#1#2{%
5800   \Hy@Warning{%
5801     PDF/A: Annotation flag `#1' must\MessageBreak
5802     be set to `#2'%
5803   }%
5804 }%
5805 \Fld@invisiblefalse
5806 \def\Fld@invisibletrue{%
5807   \HyField@PDFAFlagWarning{invisible}{false}%
5808 }%
5809 \Fld@hiddenfalse
5810 \def\Fld@hiddentruetrue{%
5811   \HyField@PDFAFlagWarning{hidden}{false}%
5812 }%
5813 \Fld@printtrue
5814 \def\Fld@printfalse{%
5815   \HyField@PDFAFlagWarning{print}{true}%
5816 }%
5817 \Fld@nozoomtrue
5818 \def\Fld@nozoomfalse{%
5819   \HyField@PDFAFlagWarning{nozoom}{true}%
5820 }%
5821 \Fld@norotatefalse
5822 \def\Fld@norotatefalse{%
5823   \HyField@PDFAFlagWarning{norotate}{true}%
5824 }%
5825 \Fld@noviewfalse
5826 \def\Fld@noviewtrue{%
5827   \HyField@PDFAFlagWarning{noview}{false}%
5828 }%
5829 \fi

```

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

```

5830 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5831 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5832 \HyField@NewFlag{Submit}{GetMethod}{4}
5833 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5834 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5835 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5836 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5837 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5838 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5839 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5840 \HyField@NewFlag{Submit}{ExclFKey}{12}
5841 \HyField@NewFlag{Submit}{EmbedForm}{14}

5842 \define@key{Field}{export}{%
5843   \lowercase{\def\Hy@temp{#1}}%
5844   \@ifundefined{Fld@export@\Hy@temp}{%
5845     \@onelevel@sanitize\Hy@temp
5846     \Hy@Error{%
5847       Unknown export format `'\Hy@temp'.\MessageBreak
5848       Known formats are `FDF', `HTML', `XFDF', and `PDF'%
5849     }%
5850   }%
5851   \let\Fld@export\Hy@temp

```

```

5852 }%
5853 }
5854 \def\Fld@export{fdf}
5855 \@namedef{Fld@export@fdf}{0}%
5856 \@namedef{Fld@export@html}{1}%
5857 \@namedef{Fld@export@xpdf}{2}%
5858 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5859 \def\HyField@FlagsSubmit{%
5860   \bitsetReset{HyField@Submit}%
5861   \ifcase\@nameuse{Fld@export@\Fld@export} %
5862     % FDF
5863     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5864     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5865     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5866     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5867     \HyField@UseFlag{Submit}{CanonicalFormat}%
5868     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5869     \HyField@UseFlag{Submit}{ExclFKey}%
5870     \HyField@UseFlag{Submit}{EmbedForm}%
5871   \or % HTML
5872     \HyField@SetFlag{Submit}{ExportFormat}%
5873     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5874     \HyField@UseFlag{Submit}{GetMethod}%
5875     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5876     \HyField@UseFlag{Submit}{CanonicalFormat}%
5877   \or % XFDF
5878     \HyField@SetFlag{Submit}{XFDF}%
5879     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5880     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5881     \HyField@UseFlag{Submit}{CanonicalFormat}%
5882   \or % PDF
5883     \HyField@SetFlag{Submit}{SubmitPDF}%
5884     \HyField@UseFlag{Submit}{GetMethod}%
5885   \fi
5886   \HyField@PrintFlags{Submit}{submit button field}%
5887   \bitsetIsEmpty{HyField@Submit}{%
5888     \let\Fld@submitflags\tx@empty
5889   }{%
5890     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5891   }%
5892 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5893 \def\HyField@FlagsAnnot#1{%
5894   \bitsetReset{HyField@F}%
5895   \HyField@UseFlag{F}{Invisible}%
5896   \HyField@UseFlag{F}{Hidden}%
5897   \HyField@UseFlag{F}{Print}%
5898   \HyField@UseFlag{F}{NoZoom}%
5899   \HyField@UseFlag{F}{NoRotate}%
5900   \HyField@UseFlag{F}{NoView}%

```

```

5901 \HyField@UseFlag{F}{Locked}%
5902 \HyField@UseFlag{F}{ToggleNoView}%
5903 \HyField@UseFlag{F}{LockedContents}%
5904 \HyField@PrintFlags{F}{#1}%
5905 \bitsetIsEmpty{HyField@F}{%
5906   \let\Fld@annotflags\ltx@empty
5907 }{%
5908   \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
5909 }%
5910 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5911 \def\HyField@FlagsPushButton{%
5912   \HyField@FlagsAnnot{push button field}%
5913   \bitsetReset{HyField@Ff}%
5914   \HyField@UseFlag{Ff}{ReadOnly}%
5915   \HyField@UseFlag{Ff}{Required}%
5916   \HyField@UseFlag{Ff}{NoExport}%
5917   \HyField@SetFlag{Ff}{Pushbutton}%
5918   \HyField@PrintFlags{Ff}{push button field}%
5919   \bitsetIsEmpty{HyField@Ff}{%
5920     \let\Fld@flags\ltx@empty
5921   }{%
5922     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5923   }%
5924 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```

5925 \def\HyField@FlagsCheckBox{%
5926   \HyField@FlagsAnnot{check box field}%
5927   \bitsetReset{HyField@Ff}%
5928   \HyField@UseFlag{Ff}{ReadOnly}%
5929   \HyField@UseFlag{Ff}{Required}%
5930   \HyField@UseFlag{Ff}{NoExport}%
5931   \HyField@PrintFlags{Ff}{check box field}%
5932   \bitsetIsEmpty{HyField@Ff}{%
5933     \let\Fld@flags\ltx@empty
5934   }{%
5935     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5936   }%
5937 }

```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```

5938 \def\HyField@FlagsRadioButton{%
5939   \HyField@FlagsAnnot{radio button field}%
5940   \bitsetReset{HyField@Ff}%
5941   \HyField@UseFlag{Ff}{ReadOnly}%
5942   \HyField@UseFlag{Ff}{Required}%
5943   \HyField@UseFlag{Ff}{NoExport}%
5944   \HyField@UseFlag{Ff}{NoToggleToOff}%
5945   \HyField@SetFlag{Ff}{Radio}%

```

```

5946 \HyField@UseFlag{Ff}{RadiosInUnison}%
5947 \HyField@PrintFlags{Ff}{radio button field}%
5948 \bitsetIsEmpty{HyField@Ff}{%
5949   \let\Fld@flags\ltx@empty
5950 }{%
5951   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5952 }%
5953 }

```

20.1.7 Text fields

\HyField@FlagsText

```

5954 \def\HyField@FlagsText{%
5955   \HyField@FlagsAnnot{text field}%
5956   \bitsetReset{HyField@Ff}%
5957   \HyField@UseFlag{Ff}{ReadOnly}%
5958   \HyField@UseFlag{Ff}{Required}%
5959   \HyField@UseFlag{Ff}{NoExport}%
5960   \HyField@UseFlag{Ff}{Multiline}%
5961   \HyField@UseFlag{Ff}{Password}%
5962   \HyField@UseFlag{Ff}{FileSelect}%
5963   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5964   \HyField@UseFlag{Ff}{DoNotScroll}%
5965   \ifFld@comb
5966     \ifcase0\ifFld@multiline
5967       \else\ifFld@password
5968       \else\ifFld@fileselect
5969       \else 1\fi\fi\fi\relax
5970   \Hy@Error{%
5971     Field option `comb' cannot used together with\MessageBreak
5972     `multiline', `password', or `fileselect'%
5973   }\@ehc
5974   \else
5975     \HyField@UseFlag{Ff}{Comb}%
5976   \fi
5977   \fi
5978   \HyField@UseFlag{Ff}{RichText}%
5979   \HyField@PrintFlags{Ff}{text field}%
5980   \bitsetIsEmpty{HyField@Ff}{%
5981     \let\Fld@flags\ltx@empty
5982   }{%
5983     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5984   }%
5985 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

5986 \def\HyField@FlagsChoice{%
5987   \HyField@FlagsAnnot{choice field}%
5988   \bitsetReset{HyField@Ff}%
5989   \HyField@UseFlag{Ff}{ReadOnly}%
5990   \HyField@UseFlag{Ff}{Required}%
5991   \HyField@UseFlag{Ff}{NoExport}%
5992   \HyField@UseFlag{Ff}{Combo}%
5993   \ifFld@combo
5994     \HyField@UseFlag{Ff}{Edit}%

```

```

5995 \fi
5996 \HyField@UseFlag{Ff}{Sort}%
5997 \HyField@UseFlag{Ff}{MultiSelect}%
5998 \ifFld@combo
5999 \ifFld@edit
6000 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
6001 \fi
6002 \fi
6003 \HyField@UseFlag{Ff}{CommitOnSelChange}%
6004 \HyField@PrintFlags{Ff}{choice field}%
6005 \bitsetIsEmpty{HyField@Ff}{%
6006 \let\Fld@flags\ltx@empty
6007 }{%
6008 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
6009 }%
6010 }

```

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`.

```

6011 \def\HyField@PDFChoices#1{%
6012 \begingroup
6013 \global\let\Fld@choices\ltx@empty
6014 \let\HyTmp@optlist\ltx@empty
6015 \let\HyTmp@optitem\relax
6016 \count@=0 %
6017 \kv@parse{#1}{%
6018 \Hy@pdfstringdef\kv@key\kv@key
6019 \ifx\kv@value\relax
6020 \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
6021 \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
6022 \else
6023 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6024 \fi
6025 \else
6026 \Hy@pdfstringdef\kv@value\kv@value
6027 \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
6028 \fi
6029 \edef\HyTmp@optlist{%
6030 \HyTmp@optlist
6031 \HyTmp@optitem{\the\count@}{\kv@key}0%
6032 }%
6033 \advance\count@ by 1 %
6034 \@gobbletwo
6035 }%
6036 \xdef\Fld@choices{/Opt[\Fld@choices]}%
6037 \ifFld@multiselect
6038 \HyField@@PDFChoices{DV}\Fld@default
6039 \HyField@@PDFChoices{V}\Fld@value
6040 \else
6041 \ifx\Fld@default\relax
6042 \else
6043 \pdfstringdef\Hy@gtemp\Fld@default
6044 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%

```

```

6045 \fi
6046 \ifx\Fld@value\relax
6047 \else
6048 \pdfstringdef\Hy@gtemp\Fld@value
6049 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
6050 \fi
6051 \fi
6052 \endgroup
6053 }

```

\HyField@@PDFChoices

```

6054 \def\HyField@@PDFChoices#1#2{%
6055 \ifx#2\relax
6056 \else
6057 \count@=0 %
6058 \def\HyTmp@optitem##1##2##3{%
6059 \def\HyTmp@key{##2}%
6060 \ifx\HyTmp@key\Hy@gtemp
6061 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6062 \HyTmp@optlist
6063 \HyTmp@optitem{##1}{##2}1%
6064 }%
6065 \let\HyTmp@found=Y%
6066 \else
6067 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6068 \HyTmp@optlist
6069 \HyTmp@optitem{##1}{##2}##3%
6070 }%
6071 \fi
6072 }%
6073 \expandafter\comma@parse\expandafter{#2}{%
6074 \pdfstringdef\Hy@gtemp\comma@entry
6075 \let\HyTmp@found=N %
6076 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6077 \HyTmp@optlist
6078 \ifx\HyTmp@found Y%
6079 \advance\count@ by 1 %
6080 \else
6081 \@onelevel@sanitize\comma@entry
6082 \PackageWarning{hyperref}{%
6083 \string\ChoiceBox: Ignoring value `\'comma@entry',%
6084 \MessageBreak
6085 it cannot be found in the choices%
6086 }%
6087 \fi
6088 \@gobble
6089 }%
6090 \def\HyTmp@optitem##1##2##3{%
6091 \ifnum##3=1 %
6092 (##2)%
6093 \fi
6094 }%
6095 \ifcase\count@
6096 \or
6097 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6098 \else
6099 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6100 \ifx#1V%

```

```

6101 \def\HyTmp@optitem##1##2##3{%
6102 \ifnum##3=1 %
6103 \@firstofone{ ##1}%
6104 \fi
6105 }%
6106 \edef\HyTmp@optlist{\HyTmp@optlist}%
6107 \xdef\Fld@choices{%
6108 \Fld@choices
6109 /I[\expandafter\@firstofone\HyTmp@optlist]%
6110 }%
6111 \fi
6112 \fi
6113 \fi
6114 }

```

20.3 Forms

\HyField@SetKeys

```

6115 \def\HyField@SetKeys{%
6116 \kvsetkeys{Field}%
6117 }

6118 \newif\ifFld@checked
6119 \newif\ifFld@disabled
6120 \Fld@checkedfalse
6121 \Fld@disabledfalse
6122 \newcount\Fld@menulength
6123 \newdimen\Fld@Width
6124 \newdimen\Fld@charsize
6125 \Fld@charsize=10\p@
6126 \def\Fld@maxlen{0}
6127 \def\Fld@align{0}
6128 \def\Fld@color{0 0 0 rg}
6129 \def\Fld@bcolor{1 1 1}
6130 \def\Fld@bordercolor{1 0 0}
6131 \def\Fld@bordersep{1\p@}
6132 \def\Fld@borderwidth{1}
6133 \def\Fld@borderstyle{S}
6134 \def\Fld@cbsymbol{4}
6135 \def\Fld@radiosymbol{H}
6136 \def\Fld@rotation{0}
6137 \def\Fld@Form{\@ifnextchar[{\@Form}{\@Form[]}}
6138 \def\Fld@endForm{\@endForm}
6139 \newif\ifForm@html
6140 \Form@htmlfalse
6141 \def\Fld@boolkey#1#2{%
6142 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6143 }
6144 \define@key{Form}{action}{%
6145 \hyper@normalise\Hy@DefFormAction{#1}%
6146 }
6147 \def\Hy@DefFormAction{\def\Fld@action}
6148 \def\enc@html{html}
6149 \define@key{Form}{encoding}{%
6150 \def\Hy@tempa{#1}%
6151 \ifx\Hy@tempa\enc@html
6152 \Form@htmltrue

```

```

6153 \def\Fld@export{html}%
6154 \else
6155 \Hy@Warning{%
6156   Form `encoding' key with \MessageBreak
6157   unknown value `#1'%
6158 }%
6159 \Form@htmlfalse
6160 \fi
6161 }
6162 \define@key{Form}{method}{%
6163 \lowercase{\def\Hy@temp{#1}}%
6164 \@ifundefined{Form@method@\Hy@temp}{%
6165 \onelevel@sanitize\Hy@temp
6166 \Hy@Error{%
6167   Unknown method ``\Hy@temp'.\MessageBreak
6168   Known values are `post' and `get'%
6169 } \@ehc
6170 }{%
6171 \let\Form@method\Hy@temp
6172 \ifcase\@nameuse{Form@method@\Hy@temp} %
6173 \Fld@getmethodfalse
6174 \else
6175 \Fld@getmethodtrue
6176 \fi
6177 }%
6178 }
6179 \def\Form@method{}
6180 \@namedef{Form@method@post}{0}
6181 \@namedef{Form@method@get}{1}
6182 \newif\ifHyField@NeedAppearances
6183 \def\HyField@NeedAppearancesfalse{%
6184 \global\let\ifHyField@NeedAppearances\iffalse
6185 }
6186 \def\HyField@NeedAppearancetrue{%
6187 \global\let\ifHyField@NeedAppearances\iftrue
6188 }
6189 \HyField@NeedAppearancetrue
6190 \define@key{Form}{NeedAppearances}[true]{%
6191 \edef\Hy@tempa{#1}%
6192 \ifx\Hy@tempa\Hy@true
6193 \HyField@NeedAppearancetrue
6194 \else
6195 \ifx\Hy@tempa\Hy@false
6196 \HyField@NeedAppearancesfalse
6197 \else
6198 \Hy@Error{%
6199   Unexpected value ``\Hy@tempa'\MessageBreak
6200   of option `NeedAppearances' instead of\MessageBreak
6201   `true' or `false'%
6202 } \@ehc
6203 \fi
6204 \fi
6205 }
6206 \def\Field@boolkey#1#2{%
6207 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6208 }
6209 \ifHy@texht

```



```

6210 \newtoks\Field@toks
6211 \Field@toks={ }%
6212 \def\Field@addtoks#1#2{%
6213   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6214   \@processme
6215 }%
6216 \else
6217 \def\Hy@WarnHTMLFieldOption#1{%
6218   \Hy@Warning{%
6219     HTML field option `#1'\MessageBreak
6220     is ignored%
6221   }%
6222 }%
6223 \fi
6224 \def\Fld@checkequals#1=#2=#3\\{%
6225   \def\@currDisplay{#1}%
6226   \ifx\\#2\\%
6227     \def\@currValue{#1}%
6228   \else
6229     \def\@currValue{#2}%
6230   \fi
6231 }
6232 \define@key{Field}{loc}{%
6233   \def\Fld@loc{#1}%
6234 }
6235 \define@key{Field}{checked}[true]{%
6236   \lowercase{\Field@boolkey{#1}}{checked}%
6237 }
6238 \define@key{Field}{disabled}[true]{%
6239   \lowercase{\Field@boolkey{#1}}{disabled}%
6240 }
6241 \ifHy@texht
6242 \define@key{Field}{accesskey}{%
6243   \Field@addtoks{accesskey}{#1}%
6244 }%
6245 \define@key{Field}{tabkey}{%
6246   \Field@addtoks{tabkey}{#1}%
6247 }%
6248 \else
6249 \define@key{Field}{accesskey}{%
6250   \Hy@WarnHTMLFieldOption{accesskey}%
6251 }%
6252 \define@key{Field}{tabkey}{%
6253   \Hy@WarnHTMLFieldOption{tabkey}%
6254 }%
6255 \fi
6256 \define@key{Field}{name}{%
6257   \def\Fld@name{#1}%
6258 }
6259 \let\Fld@altname\relax
6260 \define@key{Field}{altname}{%
6261   \def\Fld@altname{#1}%
6262 }
6263 \let\Fld@mappingname\relax
6264 \define@key{Field}{mappingname}{%
6265   \def\Fld@mappingname{#1}%
6266 }

```

```

6267 \define@key{Field}{width}{%
6268   \def\Fld@width{#1}%
6269   \Field@Width#1\setbox0=\hbox{m}%
6270 }
6271 \define@key{Field}{maxlen}{%
6272   \def\Fld@maxlen{#1}%
6273 }
6274 \define@key{Field}{menulength}{%
6275   \Fld@menulength=#1\relax
6276 }
6277 \define@key{Field}{height}{%
6278   \def\Fld@height{#1}%
6279 }
6280 \define@key{Field}{charsize}{%
6281   \setlength{\Fld@charsize}{#1}%
6282 }
6283 \define@key{Field}{borderwidth}{%
6284   \Hy@defaultbp\Fld@borderwidth{#1}%
6285 }
6286 \def\Hy@defaultbp#1#2{%
6287   \begingroup
6288     \afterassignment\Hy@defaultbpAux
6289     \dimen@=#2bp\relax{#1}{#2}%
6290 }
6291 \begingroup\expandafter\expandafter\expandafter\endgroup
6292 \expandafter\ifx\csname dimexpr\endcsname\relax
6293   \def\Hy@defaultbpAux#1\relax#2#3{%
6294     \ifx!#1!%
6295       \endgroup
6296       \def#2{#3}%
6297     \else
6298       \dimen@=.99626\dimen@
6299       \edef\x{\endgroup
6300         \def\noexpand#2{%
6301           \strip@pt\dimen@
6302         }%
6303       }\x
6304     \fi
6305   }%
6306 \else
6307   \def\Hy@defaultbpAux#1\relax#2#3{%
6308     \ifx!#1!%
6309       \endgroup
6310       \def#2{#3}%
6311     \else
6312       \edef\x{\endgroup
6313         \def\noexpand#2{%
6314           \strip@pt\dimexpr\dimen@*800/803\relax
6315         }%
6316       }\x
6317     \fi
6318   }%
6319 \fi
6320 \define@key{Field}{borderstyle}{%
6321   \let\Hy@temp\Fld@borderstyle
6322   \def\Fld@borderstyle{#1}%
6323   \Hy@Match\Fld@borderstyle{}{

```

```

6324   ^[SDBIU]$%
6325 }{}{%
6326   \Hy@Warning{%
6327     Invalid value ` \@pdfborderstyle'\MessageBreak
6328     for option `pdfborderstyle'. Valid values:\MessageBreak
6329     \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6330     \space\space I (Inset), U (Underline)\MessageBreak
6331     Option setting is ignored%
6332   }%
6333   \let\Fld@borderstyle\Hy@temp
6334 }%
6335 }
6336 \define@key{Field}{bordersep}{%
6337   \def\Fld@bordersep{#1}%
6338 }
6339 \define@key{Field}{default}{%
6340   \def\Fld@default{#1}%
6341 }
6342 \define@key{Field}{align}{%
6343   \def\Fld@align{#1}%
6344 }
6345 \define@key{Field}{value}{%
6346   \Hy@pdfstringdef\Fld@value{#1}%
6347 }
6348 \define@key{Field}{checkboxsymbol}{%
6349   \Fld@DingDef\Fld@cbsymbol{#1}%
6350 }
6351 \define@key{Field}{radiosymbol}{%
6352   \Fld@DingDef\Fld@radiosymbol{#1}%
6353 }
6354 \def\Fld@DingDef#1#2{%
6355   \let\Fld@temp\ltx@empty
6356   \Fld@@@DingDef#2\ding{}\@nil
6357   \let#1\Fld@temp
6358 }
6359 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6360   \expandafter\def\expandafter\Fld@temp\expandafter{%
6361     \Fld@temp
6362     #1%
6363   }%
6364   \ifx\\#3\\%
6365     \expandafter\@gobble
6366   \else
6367     \begingroup
6368       \lccode`0=#2\relax
6369       \lowercase{\endgroup
6370         \expandafter\def\expandafter\Fld@temp\expandafter{%
6371           \Fld@temp
6372           0%
6373         }%
6374       }%
6375       \expandafter\@firstofone
6376     \fi
6377   }%
6378   \Fld@@@DingDef#3\@nil
6379 }%
6380 }

```

```

6381 \define@key{Field}{rotation}{%
6382   \def\Fld@rotation{#1}%
6383 }

6384 \define@key{Field}{backgroundcolor}{%
6385   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6386 }
6387 \define@key{Field}{bordercolor}{%
6388   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6389 }
6390 \define@key{Field}{color}{%
6391   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6392 }

6393 \let\Fld@onclick@code\ltx@empty
6394 \let\Fld@format@code\ltx@empty
6395 \let\Fld@validate@code\ltx@empty
6396 \let\Fld@calculate@code\ltx@empty
6397 \let\Fld@keystroke@code\ltx@empty
6398 \let\Fld@onfocus@code\ltx@empty
6399 \let\Fld@onblur@code\ltx@empty
6400 \let\Fld@onmousedown@code\ltx@empty
6401 \let\Fld@onmouseup@code\ltx@empty
6402 \let\Fld@onenter@code\ltx@empty
6403 \let\Fld@onexit@code\ltx@empty
6404 \def\Hy@temp#1{%
6405   \expandafter\Hy@@temp\csize Fld@#1@code\endcsname{#1}%
6406 }
6407 \def\Hy@@temp#1#2{%
6408   \ifHy@pdfa
6409     \define@key{Field}{#2}{%
6410       \Hy@Error{%
6411         PDF/A: Additional action `#2' is prohibited%
6412       }\@ehc
6413     }%
6414   \else
6415     \define@key{Field}{#2}{%
6416       \def#1{##1}%
6417     }%
6418   \fi
6419 }
6420 \Hy@temp{keystroke}
6421 \Hy@temp{format}
6422 \Hy@temp{validate}
6423 \Hy@temp{calculate}
6424 \Hy@temp{onfocus}
6425 \Hy@temp{onblur}
6426 \Hy@temp{onenter}
6427 \Hy@temp{onexit}

6428 \let\Fld@calculate@sortkey\ltx@empty
6429 \define@key{Field}{calculatesortkey}[1]{%
6430   \def\Fld@calculate@sortkey{#1}%
6431 }

6432 \ifHy@texht
6433   \def\Hy@temp#1{%
6434     \define@key{Field}{#1}{%
6435       \Field@addtoks{#1}{##1}%
6436     }%

```

```

6437 }%
6438 \else
6439 \def\Hy@temp#1{%
6440 \define@key{Field}{#1}{%
6441 \Hy@WarnHTMLFieldOption{#1}%
6442 }%
6443 }%
6444 \fi
6445 \Hy@temp{ondblclick}
6446 \Hy@temp{onmousedown}
6447 \Hy@temp{onmouseup}
6448 \Hy@temp{onmouseover}
6449 \Hy@temp{onmousemove}
6450 \Hy@temp{onmouseout}
6451 \Hy@temp{onkeydown}
6452 \Hy@temp{onkeyup}
6453 \Hy@temp{onselect}
6454 \Hy@temp{onchange}
6455 \Hy@temp{onkeypress}
6456 \ifHy@texht
6457 \define@key{Field}{onclick}{%
6458 \Field@addtoks{onclick}{#1}%
6459 }%
6460 \else
6461 \ifHy@pdfa
6462 \define@key{Field}{onclick}{%
6463 \Hy@Error{%
6464 PDF/A: Action `onclick' is prohibited%
6465 }\@ehc
6466 }%
6467 \else
6468 \define@key{Field}{onclick}{%
6469 \def\Fld@onclick@code{#1}%
6470 }%
6471 \fi
6472 \fi

6473 \DeclareRobustCommand\TextField{%
6474 \@ifnextchar[{\@TextField}{\@TextField[]}%
6475 }
6476 \DeclareRobustCommand\ChoiceMenu{%
6477 \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6478 }
6479 \DeclareRobustCommand\CheckBox{%
6480 \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6481 }
6482 \DeclareRobustCommand\PushButton{%
6483 \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6484 }
6485 \DeclareRobustCommand\Gauge{%
6486 \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6487 }
6488 \DeclareRobustCommand\Submit{%
6489 \@ifnextchar[{\@Submit}{\@Submit[]}%
6490 }
6491 \DeclareRobustCommand\Reset{%
6492 \@ifnextchar[{\@Reset}{\@Reset[]}%
6493 }

```

```

6494 \def\LayoutTextField#1#2{% label, field
6495   #1 #2%
6496 }
6497 \def\LayoutChoiceField#1#2{% label, field
6498   #1 #2%
6499 }
6500 \def\LayoutCheckField#1#2{% label, field
6501   #1 #2%
6502 }
6503 \def\LayoutPushButtonField#1{% button
6504   #1%
6505 }
6506 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6507 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6508 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6509 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6510 \def\MakeButtonField#1{%
6511   \sbox0{%
6512     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6513   }%
6514   \@tempdima\ht0 %
6515   \advance\@tempdima by \Fld@borderwidth bp %
6516   \advance\@tempdima by \Fld@borderwidth bp %
6517   \ht0\@tempdima
6518   \@tempdima\dp0 %
6519   \advance\@tempdima by \Fld@borderwidth bp %
6520   \advance\@tempdima by \Fld@borderwidth bp %
6521   \dp0\@tempdima
6522   \box0\relax
6523 }
6524 \def\DefaultHeightofSubmit{14pt}
6525 \def\DefaultWidthofSubmit{2cm}
6526 \def\DefaultHeightofReset{14pt}
6527 \def\DefaultWidthofReset{2cm}
6528 \def\DefaultHeightofCheckBox{\baselineskip}
6529 \def\DefaultWidthofCheckBox{\baselineskip}
6530 \def\DefaultHeightofChoiceMenu{\baselineskip}
6531 \def\DefaultWidthofChoiceMenu{\baselineskip}
6532 \def\DefaultHeightofText{\baselineskip}
6533 \def\DefaultHeightofTextMultiline{4\baselineskip}
6534 \def\DefaultWidthofText{3cm}
6535 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6536 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6537 \def\DefaultOptionsofPushButton{print}
6538 \def\DefaultOptionsofCheckBox{print}
6539 \def\DefaultOptionsofText{print}

Default options for the types of \ChoiceMenu.
6540 \def\DefaultOptionsofListBox{print}
6541 \def\DefaultOptionsofComboBox{print,edit,sort}
6542 \def\DefaultOptionsofPopdownBox{print}
6543 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6544 \ifHy@hyperfigures
6545   \Hy@Info{Hyper figures ON}%

```

```

6546 \else
6547 \Hy@Info{Hyper figures OFF}%
6548 \fi
6549 \ifHy@nesting
6550 \Hy@Info{Link nesting ON}%
6551 \else
6552 \Hy@Info{Link nesting OFF}%
6553 \fi
6554 \ifHy@hyperindex
6555 \Hy@Info{Hyper index ON}%
6556 \else
6557 \Hy@Info{Hyper index OFF}%
6558 \fi
6559 \ifHy@backref
6560 \Hy@Info{backreferencing ON}%
6561 \else
6562 \Hy@Info{backreferencing OFF}%
6563 \fi
6564 \ifHy@colorlinks
6565 \Hy@Info{Link coloring ON}%
6566 \else
6567 \Hy@Info{Link coloring OFF}%
6568 \fi
6569 \ifHy@ocgcolorlinks
6570 \Hy@Info{Link coloring with OCG ON}%
6571 \else
6572 \Hy@Info{Link coloring with OCG OFF}%
6573 \fi
6574 \ifHy@pdfa
6575 \Hy@Info{PDF/A mode ON}%
6576 \else
6577 \Hy@Info{PDF/A mode OFF}%
6578 \fi

```

22 Low-level utility macros

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

```

6579 \edef\hyper@hash{\string#}
6580 \edef\hyper@tilde{\string~}
6581 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6582 \def\@currentHref{Doc-Start}
6583 \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.

```

6584 \Hy@AtBeginDocument{%
6585 \Hy@pdfstringtrue
6586 \PDF@SetupDoc
6587 \let\PDF@SetupDoc\@empty
6588 \Hy@DisableOption{pdfpagescrop}%
6589 \Hy@DisableOption{pdfpagemode}%
6590 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6591 \Hy@DisableOption{pdfdirection}%
6592 \Hy@DisableOption{pdfviewarea}%
6593 \Hy@DisableOption{pdfviewclip}%

```

```

6594 \Hy@DisableOption{pdfprintarea}%
6595 \Hy@DisableOption{pdfprintclip}%
6596 \Hy@DisableOption{pdfprintscaling}%
6597 \Hy@DisableOption{pdfduplex}%
6598 \Hy@DisableOption{pdfpicktraybypdfsize}%
6599 \Hy@DisableOption{pdfprintpagerange}%
6600 \Hy@DisableOption{pdfnumcopies}%
6601 \Hy@DisableOption{pdfstartview}%
6602 \Hy@DisableOption{pdfstartpage}%
6603 \Hy@DisableOption{pdftoolbar}%
6604 \Hy@DisableOption{pdfmenubar}%
6605 \Hy@DisableOption{pdfwindowui}%
6606 \Hy@DisableOption{pdfitwindow}%
6607 \Hy@DisableOption{pdfcenterwindow}%
6608 \Hy@DisableOption{pdfdisplaydoctitle}%
6609 \Hy@DisableOption{pdfpagelayout}%
6610 \Hy@DisableOption{pdflang}%
6611 \Hy@DisableOption{baseurl}%
6612 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6613 \Hy@pdfstringfalse
6614 }

```

Ignore star from referencing macros:

```

6615 \LetLtxMacro\NoHy@OrgRef\ref
6616 \DeclareRobustCommand*{\ref}{%
6617 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6618 }
6619 \LetLtxMacro\NoHy@OrgPageRef\pageref
6620 \DeclareRobustCommand*{\pageref}{%
6621 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6622 }

```

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.

```

6623 \def\NoHyper{%
6624 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6625 \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6626 \global\let\hyper@livelink\hyper@link
6627 \gdef\hyper@link###1##2##3{##3\Hy@xspace@end}%
6628 \let\hyper@anchor\ltx@gobble
6629 \let\hyper@anchorstart\ltx@gobble
6630 \def\hyper@anchorend{\Hy@xspace@end}%
6631 \let\hyper@linkstart\ltx@gobbletwo
6632 \def\hyper@linkend{\Hy@xspace@end}%
6633 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6634 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6635 \let\Hy@backout\@gobble
6636 }
6637 \def\stop@hyper{%
6638 \def\hyper@link@[##1]##2##3##4{##4\Hy@xspace@end}%
6639 \let\Hy@backout\@gobble
6640 \let\hyper@@anchor\ltx@gobble

```



```

6641 \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6642 \let\hyper@anchor\ltx@gobble
6643 \let\hyper@anchorstart\ltx@gobble
6644 \def\hyper@anchorend{\Hy@xspace@end}%
6645 \let\hyper@linkstart\ltx@gobbletwo
6646 \def\hyper@linkend{\Hy@xspace@end}%
6647 \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6648 \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6649 }
6650 \def\endNoHyper{%
6651 \global\let\hyper@link\hyper@livelink
6652 }
6653 \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:

```

6654 \*nohyperref
6655 \RequirePackage{letltxmacro}[2008/06/13]
6656 \let\hyper@@anchor\@gobble
6657 \def\hyper@link##1##2##3{##3}%
6658 \let\hyper@anchorstart\@gobble
6659 \let\hyper@anchorend\@empty
6660 \let\hyper@linkstart\@gobbletwo
6661 \let\hyper@linkend\@empty
6662 \def\hyper@linkurl##1##2{##1}%
6663 \def\hyper@linkfile##1##2##3{##1}%
6664 \def\hyper@link@[##1]##2##3{##1}%
6665 \let\PDF@SetupDoc\@empty
6666 \let\PDF@FinishDoc\@empty
6667 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6668 \def\Acrobatmenu#1#2{\leavevmode#2}
6669 \let\pdfstringdefDisableCommands\@gobbletwo
6670 \let\texorpdfstring\@firstoftwo
6671 \let\pdfbookmark\@undefined
6672 \newcommand\pdfbookmark[3]{}{}
6673 \let\phantomsection\@empty
6674 \let\hypersetup\@gobble
6675 \let\hyperbaseurl\@gobble
6676 \newcommand*{\href}[3]{}{#3}
6677 \let\hyperdef\@gobbletwo
6678 \let\hyperlink\@gobble
6679 \let\hypertarget\@gobble
6680 \def\hyperref{%
6681 \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6682 }
6683 \long\def\@gobbleopt[#1]{}
6684 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6685 \LetLtxMacro\NoHy@OrgRef\ref
6686 \DeclareRobustCommand*{\ref}{%
6687   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6688 }
6689 \LetLtxMacro\NoHy@OrgPageRef\pageref
6690 \DeclareRobustCommand*{\pageref}{%
6691   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6692 }
6693 \</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}`

```

6694 \<*package>
6695 \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.

```

6696 \if@filesw
6697   \ifHy@typexml
6698     \immediate\closeout\@mainaux
6699     \immediate\openout\@mainaux\jobname.aux\relax
6700     \immediate\write\@auxout{<relaxxml>\relax}%
6701   \fi
6702   \immediate\write\@auxout{%
6703     \string\providecommand\string\HyperFirstAtBeginDocument{%
6704       \string\AtBeginDocument}^^J%
6705     \string\HyperFirstAtBeginDocument{%
6706       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6707       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6708       \string\gdef\string\contentsline%
6709         \string#1\string#2\string#3\string#4{%
6710           \string\oldcontentsline%
6711             {\string#1}{\string#2}{\string#3}}^^J%
6712       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6713       \string\gdef\string\newlabel\string#1\string#2{%
6714         \string\newlabelxx{\string#1}\string#2}^^J%
6715       \string\gdef\string\newlabelxx%
6716         \string#1\string#2\string#3\string#4\string#5\string#6{%
6717         \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.

```

6718     \string\AtEndDocument{%
6719       \string\ifx\string\hyper@anchor\string\@undefined^^J%
6720       \string\let\string\contentsline\string\oldcontentsline^^J%
6721       \string\let\string\newlabel\string\oldnewlabel^^J%
6722       \string\fi%
6723     }^^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.

```

6724     \string\fi%
6725   }^^J%

```

```

6726 \string\global\string\let\string\hyper@last\relax^^J%
6727 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6728 }%
6729 \fi
6730 \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.

```

6731 \ifx\hyper@last\@undefined
6732 \def\@starttoc#1{%
6733 \begingroup
6734 \makeatletter
6735 \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6736 \IfFileExists{\jobname.#1}{%
6737 \Hy@WarningNoLine{%
6738 old #1 file detected, not used; run LaTeX again%
6739 }%
6740 }{}%
6741 \if@filesw
6742 \expandafter\newwrite\csname tf@#1\endcsname
6743 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6744 \fi
6745 \@nobreakfalse
6746 \endgroup
6747 }%
6748 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{}{}{}}%
6749 \fi
6750 }

```

26 Title strings

If options `pdftitle` and `pdfauthor` are not used, these informations for the pdf information dictionary can be extracted by the nd

```

6751 \ifHy@pdfusetitle
6752 \let\HyOrg@title\title
6753 \let\HyOrg@author\author
6754 \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
6755 \def\Hy@scanopttitle[#1]{%
6756 \gdef\Hy@title{#1}%
6757 \HyOrg@title[{#1}]%
6758 }%
6759 \def\Hy@scantitle#1{%
6760 \gdef\Hy@title{#1}%
6761 \HyOrg@title{#1}%
6762 }%
6763 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6764 \def\Hy@scanoptauthor[#1]{%
6765 \gdef\Hy@author{#1}%
6766 \HyOrg@author[{#1}]%
6767 }%
6768 \def\Hy@scanauthor#1{%
6769 \gdef\Hy@author{#1}%
6770 \HyOrg@author{#1}%

```

6771 }%

The case, that or re given before hyperref is loaded, is much more complicate, because LaTeX initializes the macros title and author with LaTeX error and warning messages.

```

6772 \begingroup
6773 \def\process@me#1\@nil#2{%
6774 \expandafter\let\expandafter\x\csname @#2\endcsname
6775 \edef\y{\expandafter\strip@prefix\meaning\x}%
6776 \def\c##1#1##2\@nil{%
6777 \ifx\\##1\\%
6778 \else
6779 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6780 \expandafter{\x}%
6781 \fi
6782 }%
6783 \expandafter\c\y\relax#1\@nil
6784 }%
6785 \expandafter\process@me\string\@latex@\@nil{title}%
6786 \expandafter\process@me\string\@latex@\@nil{author}%
6787 \endgroup
6788 \fi
6789 \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.

```

6790 \def\Hy@UseMaketitleString#1{%
6791 \ltx@ifundefined{Hy@#1}{\}%
6792 \begingroup
6793 \let\Hy@saved@hook\pdfstringdefPreHook
6794 \pdfstringdefDisableCommands{%
6795 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6796 \let\newline\\%
6797 }%
6798 \expandafter\ifx\csname @pdf#1\endcsname\@empty
6799 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6800 \csname Hy@#1\endcsname\@empty
6801 }%
6802 \fi
6803 \global\let\pdfstringdefPreHook\Hy@saved@hook
6804 \endgroup
6805 }%
6806 }
6807 \def\Hy@newline@title#1{ #1}
6808 \def\Hy@newline@author#1{, #1}
6809 \def\Hy@UseMaketitleInfos{%
6810 \Hy@UseMaketitleString{title}%
6811 \Hy@UseMaketitleString{author}%
6812 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```
6813 \RequirePackage{atbegshi}[2007/09/09]
6814 \let\Hy@EveryPageHook\ltx@empty
6815 \let\Hy@EveryPageBoxHook\ltx@empty
6816 \let\Hy@FirstPageHook\ltx@empty
6817 \AtBeginShipout{%
6818   \Hy@EveryPageHook
6819   \ifx\Hy@EveryPageBoxHook\ltx@empty
6820     \else
6821       \setbox\AtBeginShipoutBox=\vbox{%
6822         \offinterlineskip
6823         \Hy@EveryPageBoxHook
6824         \box\AtBeginShipoutBox
6825       }%
6826     \fi
6827 }
6828 \ltx@iffileloaded{hpdftex.def}{%
6829   \AtBeginShipout{%
6830     \Hy@FirstPageHook
6831     \global\let\Hy@FirstPageHook\ltx@empty
6832   }%
6833 }{%
6834   \AtBeginShipoutFirst{%
6835     \Hy@FirstPageHook
6836   }%
6837 }
6838 \g@addto@macro\Hy@FirstPageHook{%
6839   \PDF@FinishDoc
6840   \global\let\PDF@FinishDoc\ltx@empty
6841 }
```

28.1 PDF /PageLabels

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

```
6842 \ifHy@pdfpagelabels
6843   \begingroup\expandafter\expandafter\expandafter\endgroup
6844   \expandafter\ifx\csname thepage\endcsname\relax
6845     \Hy@pdfpagelabelsfalse
6846     \Hy@WarningNoLine{%
6847       Option `pdfpagelabels' is turned off\MessageBreak
6848       because \string\thepage\space is undefined%
6849     }%
6850     \csname fi\endcsname
6851     \csname iffalse\expandafter\endcsname
6852   \fi
```

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

```
6853 \def\thispdfpagelabel#1{%
6854   \gdef\HyPL@thisLabel{#1}%
6855 }%
6856 \global\let\HyPL@thisLabel\relax
```

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

```
6857 \let\HyPL@Labels\ltx@empty
```

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

```
6858 \newcount\Hy@abspage
6859 \Hy@abspage=0 %
```

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

```
6860 \def\HyPL@LastType{init}%
6861 \def\HyPL@LastNumber{0}%
6862 \let\HyPL@LastPrefix\ltx@empty
```

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

```
6863 \def\HyPL@arabic{D}%
6864 \def\HyPL@Roman{R}%
6865 \def\HyPL@roman{r}%
6866 \def\HyPL@Alph{A}%
6867 \def\HyPL@alph{a}%

6868 \let\HyPL@SlidesSetPage\ltx@empty
6869 \ltx@ifclassloaded{slides}{%
6870   \def\HyPL@SlidesSetPage{%
6871     \advance\c@page\ltx@one
6872     \ifnum\value{page}>\ltx@one
6873       \protected@edef\HyPL@SlidesOptionalPage{%
6874         \Hy@SlidesFormatOptionalPage{thepage}%
6875       }%
6876     \else
6877       \let\HyPL@SlidesOptionalPage\ltx@empty
6878     \fi
6879     \advance\c@page-\ltx@one
6880     \def\HyPL@page{%
6881       \csname the\Hy@SlidesPage\endcsname
6882       \HyPL@SlidesOptionalPage
6883     }%
6884   }%
6885 }{}
```

`\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.

```
6886 \def\HyPL@EveryPage{%
6887   \begingroup
6888   \ifx\HyPL@thisLabel\relax
6889     \let\HyPL@page\thepage
6890     \HyPL@SlidesSetPage
6891   \else
6892     \let\HyPL@page\HyPL@thisLabel
6893     \global\let\HyPL@thisLabel\relax
6894   \fi
6895   \let\HyPL@Type\relax
6896   \ifnum\c@page>0 %
6897     \ifx\HyPL@SlidesSetPage\ltx@empty
6898       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6899     \fi
6900   \fi
6901   \let\Hy@temp Y%
6902   \ifx\HyPL@Type\HyPL@LastType
```

```

6903 \else
6904 \let\Hy@temp N%
6905 \fi
6906 \ifx\HyPL@Type\relax
6907 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6908 \else
6909 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6910 \fi
6911 \ifx\HyPL@Prefix\HyPL@LastPrefix
6912 \else
6913 \let\Hy@temp N%
6914 \fi
6915 \if Y\Hy@temp
6916 \advance\c@page by -1 %
6917 \ifnum\HyPL@LastNumber=\the\c@page\relax
6918 \else
6919 \let\Hy@temp N%
6920 \fi
6921 \Hy@StepCount\c@page
6922 \fi
6923 \if N\Hy@temp
6924 \ifx\HyPL@Type\relax
6925 \HyPL@storePageLabel{/P(\HyPL@Prefix)}%
6926 \else
6927 \HyPL@storePageLabel{%
6928 \ifx\HyPL@Prefix\@empty
6929 \else
6930 /P(\HyPL@Prefix)%
6931 \fi
6932 /S/\csname HyPL\HyPL@Type\endcsname
6933 \ifnum\the\c@page=1 %
6934 \else
6935 \space/St \the\c@page
6936 \fi
6937 }%
6938 \fi
6939 \fi
6940 \xdef\HyPL@LastNumber{\the\c@page}%
6941 \global\let\HyPL@LastType\HyPL@Type
6942 \global\let\HyPL@LastPrefix\HyPL@Prefix
6943 \endgroup
6944 \Hy@GlobalStepCount\Hy@abspage
6945 }%

```

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

```

6946 \def\HyPL@CheckThePage#1\@nil{%
6947 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6948 }%

```

`\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`.

```

6949 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6950 \def\Hy@tempa{#4}%
6951 \def\Hy@tempb{\csname\endcsname\c@page}%

```

```

6952 \ifx\Hy@tempa\Hy@tempb
6953 \expandafter\ifx\csname HyPL#3\endcsname\relax
6954 \else
6955 \def\HyPL@Type{#3}%
6956 \def\HyPL@Prefix{#2}%
6957 \fi
6958 \else
6959 \beginingroup
6960 \let\Hy@next\endgroup
6961 \let\HyPL@found\@undefined
6962 \def\arabic{\HyPL@Format{arabic}}%
6963 \def\Roman{\HyPL@Format{Roman}}%
6964 \def\roman{\HyPL@Format{roman}}%
6965 \def\Alph{\HyPL@Format{Alph}}%
6966 \def\alph{\HyPL@Format{alph}}%
6967 \protected@edef\Hy@temp{#1}%
6968 \ifx\HyPL@found\relax
6969 \toks@{\expandafter{\Hy@temp}}%
6970 \edef\Hy@next{\endgroup
6971 \noexpand\HyPL@@@CheckThePage\the\toks@
6972 \noexpand\HyPL@found\relax\noexpand\@nil
6973 }%
6974 \fi
6975 \Hy@next
6976 \fi
6977 }%

```

\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`.

```

6978 \def\HyPL@Format#1#2{%
6979 \ifx\HyPL@found\@undefined
6980 \expandafter\ifx\csname c@#2\endcsname\c@page
6981 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6982 \else
6983 \expandafter\noexpand\csname#1\endcsname{#2}%
6984 \fi
6985 \else
6986 \expandafter\noexpand\csname#1\endcsname{#2}%
6987 \fi
6988 }%

```

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

```

6989 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6990 \def\Hy@tempa{#3}%
6991 \def\Hy@tempb{\HyPL@found\relax}%
6992 \ifx\Hy@tempa\Hy@tempb
6993 \def\HyPL@Type{#2}%
6994 \def\HyPL@Prefix{#1}%
6995 \fi
6996 }%

```

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

```

6997 \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`.

```
6998 \def\HyPL@Useless{0<</S/D>>}%
6999 \@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.

```
7000 \def\HyPL@SetPageLabels{%
7001   \@onelevel@sanitize\HyPL@Labels
7002   \ifx\HyPL@Labels\@empty
7003   \else
7004     \ifx\HyPL@Labels\HyPL@Useless
7005     \else
7006       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
7007     \fi
7008   \fi
7009 }%
```

```
7010 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
7011 \fi
```

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

```
7012 \Hy@DisableOption{pdfpagelabels}
7013 </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`

```
7014 <*pdfTeX>
7015 \pdf@ifdraftmode{%
7016   \let\Hy@PutCatalog\ltx@gobble
7017 }{%
7018   \let\Hy@PutCatalog\pdfcatalog
7019 }
7020 </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.

```
7021 <*vTeX>
7022 \providecommand*\XR@ext{}{pdf}
7023 \edef\Hy@VTeXversion{%
7024   \ifx\VTeXversion\@undefined
7025     \z@
7026   \else
7027     \ifx\VTeXversion\relax
7028     \z@
7029   \else
7030     \VTeXversion
7031   \fi
7032 \fi
```

```

7033 }
7034 \begingroup
7035 \ifnum\Hy@VTeXversion<660 %
7036   \gdef\Hy@PutCatalog#1{%
7037     \Hy@WarningNoLine{%
7038       VTeX 6.59g or above required for pdfpagelabels%
7039     }%
7040   }%
7041 \else
7042   \gdef\Hy@PutCatalog#1{%
7043     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7044   }%
7045   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7046     \ifx\#2\%
7047       \else
7048         \immediate\special{!pdfpagelabels #2}%
7049       \fi
7050     }%
7051   \fi
7052 \endgroup
7053 \</vtex>

7054 \<*pdftex | vtex>

```

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

```

7055 \ifHy@pdfpagelabels
7056   \def\HyPL@StorePageLabel#1{%
7057     \toks@\expandafter{\HyPL@Labels}%
7058     \xdef\HyPL@Labels{%
7059       \the\toks@
7060       \the\Hy@abspage<<#1>>%
7061     }%
7062   }%

```

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.

```

7063 \RequirePackage{atveryend}[2009/12/07]%
7064 \AtVeryEndDocument{%
7065   \HyPL@SetPageLabels
7066 }%

7067 \fi
7068 \</pdftex | vtex>

```

28.1.2 xetex

```

7069 \<*xetex>
7070 \HyPsd@LoadUnicode
7071 \Hy@unicodetrue
7072 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7073 \else
7074   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7075 \fi
7076 \HyPsd@LoadStringEnc
7077 \define@key{Hyp}{unicode}[true]{%
7078   \Hy@boolkey{unicode}{#1}%
7079   \ifHy@unicode

```

```

7080 \else
7081   \Hy@Warning{%
7082     XeTeX driver only supports `unicode=true'. Ignoring\MessageBreak
7083     option setting `unicode=false'%
7084   }%
7085   \Hy@unicodetrue
7086 \fi
7087 }
7088 \define@key{Hyp}{pdfencoding}{%
7089   \edef\HyPsd@temp{#1}%
7090   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7091     \let\HyPsd@pdfencoding\HyPsd@temp
7092   \else
7093     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7094       \let\HyPsd@pdfencoding\HyPsd@temp
7095     \else
7096       \Hy@Warning{%
7097         XeTeX driver only supports\MessageBreak
7098         `pdfencoding=unicode|auto'. Ignoring option\MessageBreak
7099         setting `pdfencoding=\HyPsd@temp'%
7100       }%
7101     \fi
7102   \fi
7103 }
7104 \let\HyXeTeX@CheckUnicode\relax
7105 \</xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

7106 \<pdfmarkbase>
7107 \begingroup
7108   \@ifundefined{headerps@out}{-}{%
7109     \toks@{\expandafter{\Hy@FirstPageHook}}%
7110     \xdef\Hy@FirstPageHook{%
7111       \noexpand\headerps@out{%
7112         systemdict /pdfmark known%
7113         {%
7114           userdict /?pdfmark systemdict /exec get put%
7115         }{%
7116           userdict /?pdfmark systemdict /pop get put %
7117           userdict /pdfmark systemdict /cleartomark get put%
7118         }%
7119         ifelse%
7120       }%
7121       \the\toks@
7122     }%
7123   }%
7124 \endgroup
7125 \</pdfmarkbase>

```

\Hy@PutCatalog

```

7126 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview <<#1>>}}
7127 \<pdfmarkbase>
7128 \def\Hy@PutCatalog#1{%
7129   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7130 }
7131 \</pdfmarkbase>

7132 \<pdfmarkbase | dvipdfm | xetex>

```

```
7133 \ifHy@pdfpagelabels
```

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

```
7134 \def\HyPL@StorePageLabel#1{%
7135   \if@filesw
7136     \begingroup
7137     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7138     \immediate\write\@mainaux{%
7139       \string\HyPL@Entry{\Hy@tempa}%
7140     }%
7141   \endgroup
7142   \fi
7143 }%
```

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.

```
7144 \Hy@AtBeginDocument{%
7145   \if@filesw
7146     \immediate\write\@mainaux{%
7147       \string\providecommand\string*\string\HyPL@Entry[1]{}%
7148     }%
7149   \fi
7150   \ifx\HyPL@Labels\@empty
7151     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7152   \else
7153     \HyPL@SetPageLabels
7154   \fi
7155   \let\HyPL@Entry\@gobble
7156 }%
```

`\HyPL@Entry`

```
7157 \def\HyPL@Entry#1{%
7158   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7159     \HyPL@Labels
7160     #1%
7161   }%
7162 }%

7163 \fi
7164 </pdfmarkbase | dvipdfm | xetex>

7165 <*package>

7166 \ifx\MaybeStopEarly\relax
7167 \else
7168   \Hy@stoppedearlytrue
7169   \expandafter\MaybeStopEarly
7170 \fi
7171 \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

```

7172 \def\Hy@CounterExists#1{%
7173   \begingroup\expandafter\expandafter\expandafter\endgroup
7174   \expandafter\ifx\csname c@#1\endcsname\relax
7175     \expandafter\@gobble
7176   \else
7177     \begingroup\expandafter\expandafter\expandafter\endgroup
7178     \expandafter\ifx\csname the#1\endcsname\relax
7179       \expandafter\expandafter\expandafter\@gobble
7180     \else
7181       \expandafter\expandafter\expandafter\@firstofone
7182     \fi
7183   \fi
7184 }
7185 \Hy@CounterExists{section}{%
7186   \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7187 }
7188 \Hy@CounterExists{part}{%
7189   \providecommand\theHpart{\arabic{part}}}%
7190 }
7191 \ltx@ifundefined{thechapter}{%
7192   \providecommand\theHsection   {\arabic{section}}%
7193   \providecommand\theHfigure    {\arabic{figure}}%
7194   \providecommand\theHtable     {\arabic{table}}%
7195 }{%
7196   \providecommand\theHchapter   {\arabic{chapter}}%
7197   \providecommand\theHfigure    {\theHchapter.\arabic{figure}}%
7198   \providecommand\theHtable     {\theHchapter.\arabic{table}}%
7199   \providecommand\theHsection   {\theHchapter.\arabic{section}}%
7200 }
7201 \providecommand\theHsubsection  {\theHsection.\arabic{subsection}}
7202 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7203 \providecommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
7204 \providecommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
7205 \providecommand\theHtheorem     {\theHsection.\arabic{theorem}}
7206 \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.

```

7207 \let\H@item\item
7208 \newcounter{Item}
7209 \def\theHItem{\arabic{Item}}

```

```

7210 \def\item{%
7211   \@hyper@itemfalse
7212   \if@nmbrlist\@hyper@itemtrue\fi
7213   \H@item
7214 }

7215 \providecommand\theHenumi   {\theHItem}
7216 \providecommand\theHenumii  {\theHItem}
7217 \providecommand\theHenumiii {\theHItem}
7218 \providecommand\theHenumiv  {\theHItem}
7219 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7220 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7221 \@ifundefined{theHHmpfootnote}{%
7222   \let\theHHmpfootnote\theHHfootnote
7223 }{}

```

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.

```

7224 \let\H@refstepcounter\refstepcounter
7225 \edef\name@of@eq{equation}%
7226 \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.

```

7227 \newif\if@hyper@item
7228 \newif\if@skiphyperref
7229 \@hyper@itemfalse
7230 \@skiphyperreffalse
7231 \def\refstepcounter#1{%
7232   \ifHy@pdfstring
7233   \else
7234     \H@refstepcounter{#1}%
7235     \edef\This@name{#1}%
7236     \ifx\This@name\name@of@slide
7237     \else
7238       \if@skiphyperref
7239       \else
7240         \if@hyper@item
7241           \stepcounter{Item}%
7242           \hyper@refstepcounter{Item}%
7243           \@hyper@itemfalse
7244         \else
7245           \hyper@refstepcounter{#1}%
7246         \fi
7247       \fi
7248     \fi
7249   \fi
7250 }
7251 \let\Hy@saved@refstepcounter\refstepcounter

```

AMSI^ATeX 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.

```

7252 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7253 \def\hyper@refstepcounter#1{%
7254   \edef\This@name{#1}%
7255   \ifx\This@name\name@of@eq
7256     \@ifundefined{theHequation}{%
7257       \make@stripped@name{\theequation}%
7258       \let\theHequation\newname
7259     }{}%
7260   \fi
7261   \HyCnt@ProvideTheHCounter{#1}%
7262   \hyper@makecurrent{#1}%
7263   \ifmeasuring@
7264   \else
7265     \Hy@raisedlink{%
7266       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7267     }%
7268   \fi
7269 }

```

`\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.

```

7270 \def\HyCnt@ProvideTheHCounter#1{%
7271   \@ifundefined{theH#1}{%
7272     \expandafter\def\csname theH#1\endcsname{}%
7273     \def\Hy@temp{\@elt{#1}}%
7274     \ltx@onelevel@sanitize\Hy@temp
7275     \let\HyOrg@elt\@elt
7276     \edef\@elt{%
7277       \noexpand\HyCnt@LookForParentCounter
7278       \expandafter\noexpand\csname theH#1\endcsname
7279     }%
7280     \cl@&@ckpt
7281     \let\@elt\HyOrg@elt
7282     \expandafter
7283     \ltx@LocalAppendToMacro\csname theH#1\endcsname\expandafter\endcsname
7284     \expandafter{%
7285       \expandafter\@arabic\csname c@#1\endcsname
7286     }%
7287   }{}%
7288 }

```

`\Hy@LookForParentCounter`

```

7289 \def\HyCnt@LookForParentCounter#1#2{%
7290   \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7291   \ltx@ifundefined{cl@#2}{%
7292   }{%
7293     \ltx@onelevel@sanitize\Hy@temp@A
7294     \edef\Hy@temp@A{%
7295       \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7296     }\Hy@temp@A
7297     \ifin@
7298     \ltx@ifundefined{theH#2}{%
7299       \expandafter\ltx@LocalAppendToMacro\expandafter#1%

```

```

7300     \expandafter{%
7301     \expandafter\@arabic\csname c@#2\endcsname.%
7302     }%
7303   }{%
7304     \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7305     \expandafter{%
7306     \csname theH#2\endcsname.%
7307     }%
7308   }%
7309   \fi
7310 }%
7311 }

```

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`.

```

7312 \begingroup\expandafter\expandafter\expandafter\endgroup
7313 \expandafter\ifx\csname chapter\endcsname\relax
7314   \def\Hy@chapterstring{section}%
7315 \else
7316   \def\Hy@chapterstring{chapter}%
7317 \fi
7318 \def\Hy@appendixstring{appendix}
7319 \def\Hy@chapapp{\Hy@chapterstring}
7320 \ltx@ifundefined{appendix}{%
7321 }{%
7322   \let\HyOrg@appendix\appendix
7323   \def\Hy@AlphNoErr#1{%
7324     \ifnum\value{#1}>26 %
7325       Alph\number\value{#1}%
7326     \else
7327       \ifnum\value{#1}<1 %
7328         Alph\number\value{#1}%
7329       \else
7330         \Alph{#1}%
7331       \fi
7332     \fi
7333   }%
7334   \def\appendix{%
7335     \ltx@ifundefined{chapter}{%
7336       \gdef\theHsection{\Hy@AlphNoErr{section}}}%
7337     }{%
7338       \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
7339     }%
7340     \xdef\Hy@chapapp{\Hy@appendixstring}%
7341     \HyOrg@appendix
7342   }%
7343 }

```

`\Hy@Test@alph`

```

7344 \def\Hy@Test@alph#1{%
7345   \ifcase#1\or
7346     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7347     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or

```



```

7348   u\or v\or w\or x\or y\or z%
7349   \else
7350   \@ctrerr
7351   \fi
7352 }

```

\Hy@Test@Alph

```

7353 \def\Hy@Test@Alph#1{%
7354   \ifcase#1\or
7355   A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7356   K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7357   U\or V\or W\or X\or Y\or Z%
7358   \else
7359   \@ctrerr
7360   \fi
7361 }

```

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

```

7362 \def\hyper@makecurrent#1{%
7363   \begingroup
7364   \Hy@safe@activetrue
7365   \edef\Hy@param{#1}%
7366   \ifx\Hy@param\Hy@chapterstring
7367     \let\Hy@param\Hy@chapapp
7368   \fi
7369   \ifHy@hypertextnames
7370     \let\@number\@firstofone
7371     \def\@fnsymbol##1{\fnsymbol\number##1}%
7372     \def\@arabic##1{\number##1}%
7373     \ifx\@alph\Hy@Test@alph
7374       \else
7375       \def\@alph{alph\number}%
7376       \fi
7377     \ifx\@Alph\Hy@Test@Alph
7378       \else
7379       \def\@Alph{Alph\number}%
7380       \fi
7381     \ifHy@naturalnames
7382       \let\textlatin\@firstofone
7383       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7384     \else
7385       \xdef\HyperGlobalCurrentHref{%
7386         \csname
7387         the%
7388         \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7389         #1%
7390         \endcsname
7391       }%
7392     \fi
7393     \xdef\HyperGlobalCurrentHref{%
7394       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7395     }%
7396   \else
7397     \Hy@GlobalStepCount\Hy@linkcounter
7398     \xdef\HyperGlobalCurrentHref{\Hy@param.the\Hy@linkcounter}%
7399   \fi

```

```

7400 \endgroup
7401 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7402 \ifHy@localanchorname
7403   \let\@currentHref\HyperLocalCurrentHref
7404 \else
7405   \global\let\@currentHref\HyperGlobalCurrentHref
7406 \fi
7407 }

\Hy@MakeCurrentHref

7408 \def\Hy@MakeCurrentHref#1{%
7409   \edef\HyperLocalCurrentHref{#1}%
7410   \@onelevel@sanitize\HyperLocalCurrentHref
7411   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7412   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7413   \ifHy@localanchorname
7414     \let\@currentHref\HyperLocalCurrentHref
7415   \else
7416     \global\let\@currentHref\HyperGlobalCurrentHref
7417   \fi
7418 }

```

\Hy@MakeCurrentHrefAuto

```

7419 \def\Hy@MakeCurrentHrefAuto#1{%
7420   \Hy@GlobalStepCount\Hy@linkcounter
7421   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7422 }

```

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

```

7423 \def\@currentHlabel{\@currentHref}

7424 \@ifpackageloaded{fancyvrb}{%
7425   \@ifpackagelater{fancyvrb}{1998/05/20}{%
7426     \def\FV@StepLineNo{%
7427       \FV@SetLineNo
7428       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
7429       \FV@StepLineNo
7430     }%
7431   }%
7432 }{}

```

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 hypertexnames 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

```

7433 \Hy@AtBeginDocument{%
7434   \@ifclassloaded{revtex4}{%
7435     \@namedef{ver@lastpage.sty}{1994/06/25}%
7436   }{}%

```

```

7437 \@ifpackageloaded{lastpage}{%
7438   \ifHy@pageanchor
7439   \else
7440     \Hy@WarningNoLine{%
7441       The \string\pageref{LastPage} link doesn't work\MessageBreak
7442       with disabled option `pageanchor'%
7443     }%
7444   \fi
7445   \def\lastpage@putlabel{%
7446     \addtocounter{page}{-1}%
7447     \if@filesw
7448       \begingroup
7449         \let\@number\@firstofone
7450         \ifHy@pageanchor
7451           \ifHy@hypertextnames
7452             \ifHy@plainpages
7453               \def\Hy@temp{\arabic{page}}%
7454             \else
7455               \Hy@unicodedefalse
7456               \pdfstringdef\Hy@temp{\thepage}%
7457             \fi
7458           \else
7459             \def\Hy@temp{\the\Hy@pagecounter}%
7460           \fi
7461         \fi
7462         \immediate\write\@auxout{%
7463           \string\newlabel
7464           {LastPage}{\the\Hy@temp}{\thepage}{\thepage}%
7465           \ifHy@pageanchor page.\Hy@temp\fi}{}}%
7466       }%
7467     \endgroup
7468   \fi
7469   \addtocounter{page}{1}%
7470 }%
7471 \@ifclassloaded{revtex4}{%
7472   \begingroup
7473     \toks@{\expandafter\lastpage@putlabel}%
7474     \edef\x{\endgroup
7475       \def\noexpand\lastpage@putlabel{%
7476         \noexpand\stepcounter{page}%
7477         \the\toks@
7478         \noexpand\addtocounter{page}\noexpand\m@ne
7479       }%
7480     }%
7481     \x
7482   }{}%
7483 }{}%
7484 }
7485 \end{package}
7486 \checkpackage{lastpage}[1994/06/25]
7487 \checkcommand\def\lastpage@putlabel{%
7488   \addtocounter{page}{-1}%
7489   \immediate\write\@auxout{%
7490     \string\newlabel{LastPage}{\the\Hy@temp}{\thepage}{\thepage}%
7491   }%
7492 }%
7493 \addtocounter{page}{1}%

```

```

7494 }
7495 </check>
7496 <*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.

```

7497 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
7498 \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:

```

7499 \@ifpackageloaded{titlesec}{%
7500   \def\ttl@Hy@steplink#1{%
7501     \Hy@MakeCurrentHrefAuto{#1*}%
7502     \edef\ttl@Hy@saveanchor{%
7503       \noexpand\Hy@raisedlink{%
7504         \noexpand\hyper@anchorstart{\@currentHref}%
7505         \noexpand\hyper@anchorend
7506         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7507         \noexpand\ttl@Hy@PatchSaveWrite
7508       }%
7509     }%
7510   }%
7511   \def\ttl@Hy@PatchSaveWrite{%
7512     \begingroup
7513     \toks@{\expandafter{\ttl@savewrite}}%
7514     \edef\x{\endgroup
7515       \def\noexpand\ttl@savewrite{%
7516         \let\noexpand\@currentHref
7517         \noexpand\ttl@Hy@SavedCurrentHref
7518         \the\toks@
7519       }%
7520     }%
7521     \x
7522   }%
7523   \def\ttl@Hy@refstepcounter#1{%
7524     \let\ttl@b\Hy@raisedlink
7525     \def\Hy@raisedlink##1{%
7526       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7527     }%
7528     \refstepcounter{#1}%
7529     \let\Hy@raisedlink\ttl@b
7530   }%
7531 }{}

```

Package titletoc support:

```

7532 \@ifpackageloaded{titletoc}{%
7533   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7534 }{}

```

33 Package varioref support

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

```
7535 \def\Hy@varioref@undefined{{??}{??}{-}{-}{-}}
7536 \@ifpackageloaded{varioref}{%
7537   \def\vref@pagenum#1#2{%
7538     \@ifundefined{r@#2}{%
7539       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7540     }{}%
7541     \edef#1{\getpagerefnumber{#2}}%
7542   }%
7543 }
```

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

```
7544 \def\Hy@varioref@refstepcounter#1{%
7545   \stepcounter{#1}%
7546   \protected@edef\@currentlabel{%
7547     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7548   }%
7549 }
7550 \AtBeginDocument{%
7551   \ifx\refstepcounter\Hy@varioref@refstepcounter
7552     \let\H@refstepcounter\refstepcounter
7553     \let\refstepcounter\Hy@saved@refstepcounter
7554   \fi
7555 }
```

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

```
7556 \@ifpackageloaded{longtable}{%
7557   \begingroup
7558     \def\y{\LT@array}%
7559     \@ifundefined{scr@LT@array}{%
7560       \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
7561     }{\def\y{\scr@LT@array}}%
7562     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7563       \expandafter\endgroup
7564       \expandafter\def\y[##1]##2{%
7565         \H@refstepcounter{#1}%
7566         \hyper@makecurrent{table}%
7567         \let\Hy@LT@currentHref\@currentHref
7568         #2\@sharp###4%
7569       }%
7570     }%
7571     \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
```

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

```
7572 \begingroup
7573   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
```

```

7574 \endgroup
7575 \def\LT@start{%
7576   #1%
7577   \ifvoid\LT@foot#2\fi
7578   \let\@currentHref\Hy@LT@currentHref
7579   \Hy@raisedlink{%
7580     \hyper@anchorstart{\@currentHref}\hyper@anchorend
7581   }%
7582   #3%
7583 }%
7584 }%
7585 \expandafter\x\LT@start\@nil
7586 }{}

```

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.

```

7587 \let\new@refstepcounter\refstepcounter
7588 \let\H@equation\equation
7589 \let\H@endequation\endequation
7590 \@ifpackageloaded{amsmath}{%
7591   \long\def\Hy@temp{%
7592     \incr@eqnum
7593     \mathdisplay@push
7594     \st@rredfalse \global\@eqnswtrue
7595     \mathdisplay{equation}%
7596   }%
7597   \ifx\Hy@temp\equation
7598     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7599       \csname iftrue\endcsname
7600   \else
7601     \long\def\equation{%
7602       \mathdisplay@push
7603       \st@rredfalse \global\@eqnswtrue
7604       \mathdisplay{equation}%
7605       \incr@eqnum
7606     }%
7607   \fi
7608   \fi
7609 }{}%
7610 \def\equation{%
7611   \let\refstepcounter\H@refstepcounter
7612   \H@equation
7613   \@ifundefined{theHequation}{%
7614     \make@stripped@name{\theequation}%
7615     \let\theHequation\newname
7616   }{}%
7617   \hyper@makecurrent{equation}%

```

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

```

7618   \mathopen{%
7619     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%

```

```

7620 }%
7621 \let\refstepcounter\new@refstepcounter
7622 }%
7623 \def\endequation{%
7624   \ifx\Hy@raisedlink\ltx@empty
7625     \hyper@anchorend
7626   \else
7627     \mathclose{\Hy@raisedlink{\hyper@anchorend}}%
7628   \fi
7629   \H@endequation
7630 }%
7631 }

```

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.

```

7632 \newif\if@eqnstar
7633 \@eqnstarfalse
7634 \let\H@eqnarray\eqnarray
7635 \let\H@endeqnarray\endeqnarray
7636 \def\eqnarray{%
7637   \let\Hy@reserved@a\relax
7638   \def\@currentHref{}%
7639   \H@eqnarray
7640   \if@eqnstar
7641   \else
7642     \ifx\\\@currentHref\\%
7643     \else
7644       \@ifundefined{theHequation}{%
7645         \make@stripped@name{\theequation}%
7646         \let\theHequation\newname
7647       }{}%
7648       \hyper@makecurrent{equation}%
7649       \mathopen{%
7650         \Hy@raisedlink{%
7651           \hyper@anchorstart{\@currentHref}\hyper@anchorend
7652         }%
7653       }%
7654     \fi
7655   \fi
7656 }
7657 \def\endeqnarray{%
7658   \H@endeqnarray
7659 }

```

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.

```

7660 \@namedef{eqnarray*}{%
7661   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7662 }
7663 \@namedef{endeqnarray*}{%
7664   \nonumber\endeqnarray\@eqnstarfalse
7665 }

```

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

this:

```

7666 \ltx@ifundefined{subeqnarray}{-}{%
7667   \let\H@subeqnarray\subeqnarray
7668   \let\H@endsubeqnarray\endsubeqnarray
7669   \def\subeqnarray{%
7670     \let\Hy@reserved@a\relax
7671     \H@subeqnarray
7672     \@ifundefined{theHequation}{%
7673       \make@stripped@name{\theequation}%
7674       \let\theHequation\newname
7675     }{}%
7676     \hyper@makecurrent{equation}%
7677     \hyper@anchorstart{\@currentHref}{-}\hyper@anchorend
7678   }%
7679   \def\endsubeqnarray{%
7680     \H@endsubeqnarray
7681   }%
7682   \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7683 }

```

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

```

7684 \def\make@stripped@name#1{%
7685   \begingroup
7686   \escapechar\m@ne
7687   \global\let\newname\@empty
7688   \protected@edef\Hy@tempa{#1}%
7689   \edef\@tempb{%
7690     \noexpand\@tfor\noexpand\Hy@tempa:=%
7691     \expandafter\strip@prefix\meaning\Hy@tempa
7692   }%
7693   \@tempb\do{%
7694     \if\Hy@tempa\else
7695     \if\Hy@tempa\else
7696       \xdef\newname{\newname\Hy@tempa}%
7697     \fi
7698   }%
7699 }%
7700 \endgroup
7701 }

```

Support for amsmath's subequations:

```

7702 \begingroup\expandafter\expandafter\expandafter\endgroup
7703 \expandafter\ifx\csname subequations\endcsname\relax
7704 \else
7705   \let\HyOrg@subequations\subequations
7706   \def\subequations{%
7707     \stepcounter{equation}%
7708     \protected@edef\theHparentequation{%
7709       \@ifundefined{theHequation}\theequation\theHequation
7710     }%
7711     \addtocounter{equation}{-1}%
7712     \HyOrg@subequations
7713     \def\theHequation{\theHparentequation\alph{equation}}%
7714     \ignorespaces
7715   }%
7716 \fi

```


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

```

7717 \Hy@AtBeginDocument{%
7718 \@ifpackageloaded{cleveref}{%
7719 \let\Hy@savethm\@thm
7720 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7721 }{%
7722 \@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

7723 \def\Hy@temp#1#2#3{%
7724 \ifhmode\unskip\unskip\par\fi
7725 \normalfont
7726 \trivlist
7727 \let\thmheadnl\relax
7728 \let\thm@swap\@gobble
7729 \let\thm@indent\indent % indent
7730 \thm@headfont{\scshape}% heading font small caps
7731 \thm@notefont{\fontseries\mddefault\upshape}%
7732 \thm@headpunct{.}% add period after heading
7733 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7734 \thm@space@setup
7735 #1% style overrides
7736 \@topsep \thm@preskip % used by thm head
7737 \@topsepadd \thm@postskip % used by \@endparenv
7738 \def\@tempa{#2}\ifx\@empty\@tempa
7739 \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}}%
7740 \else
7741 \refstepcounter{#2}%
7742 \def\@tempa{%
7743 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7744 }%
7745 \fi
7746 \@tempa
7747 }%
7748 \ifx\Hy@temp\@thm
7749 \def\@thm#1#2#3{%
7750 \ifhmode
7751 \unskip\unskip\par
7752 \fi
7753 \normalfont
7754 \trivlist
7755 \let\thmheadnl\relax
7756 \let\thm@swap\@gobble
7757 \let\thm@indent\indent % indent
7758 \thm@headfont{\scshape}% heading font small caps
7759 \thm@notefont{\fontseries\mddefault\upshape}%
7760 \thm@headpunct{.}% add period after heading
7761 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7762 \thm@space@setup
7763 #1% style overrides
7764 \@topsep \thm@preskip % used by thm head
7765 \@topsepadd \thm@postskip % used by \@endparenv
7766 \def\dth@counter{#2}%
7767 \ifx\@empty\dth@counter

```

```

7768 \def\@tempa{%
7769 \@oparg{\@begintheorem{#3}{}}{}%
7770 }%
7771 \else
7772 \H@refstepcounter{#2}%
7773 \hyper@makecurrent{#2}%
7774 \let\Hy@dth@currentHref\@currentHref
7775 \def\@tempa{%
7776 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7777 }%
7778 \fi
7779 \@tempa
7780 }%
7781 \else
7782 \def\@thm#1#2#3{%
7783 \ifhmode
7784 \unskip\unskip\par
7785 \fi
7786 \normalfont
7787 \trivlist
7788 \let\thmheadnl\relax
7789 \let\thm@swap\@gobble
7790 \thm@notefont{\fontseries\mddefault\upshape}%
7791 \thm@headpunct{.}% add period after heading
7792 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7793 \thm@space@setup
7794 #1% style overrides
7795 \@topsep \thm@preskip % used by thm head
7796 \@topsepadd \thm@postskip % used by \@endparenv
7797 \def\dth@counter{#2}%
7798 \ifx\@empty\dth@counter
7799 \def\@tempa{%
7800 \@oparg{\@begintheorem{#3}{}}{}%
7801 }%
7802 \else
7803 \H@refstepcounter{#2}%
7804 \hyper@makecurrent{#2}%
7805 \let\Hy@dth@currentHref\@currentHref
7806 \def\@tempa{%
7807 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7808 }%
7809 \fi
7810 \@tempa
7811 }%
7812 \fi
7813 \dth@everypar={%
7814 \@minipagefalse
7815 \global\@newlistfalse
7816 \@noparitemfalse
7817 \if@inlabel
7818 \global\@inlabelfalse
7819 \begingroup
7820 \setbox\z@\lastbox
7821 \ifvoid\z@
7822 \kern-\itemindent
7823 \fi
7824 \endgroup

```

```

7825 \ifx\@empty\dth@counter
7826 \else
7827 \Hy@raisedlink{%
7828 \hyper@anchorstart{%
7829 \ltx@ifundefined{Hy@dth@currentHref}%
7830 \@currentHref\Hy@dth@currentHref
7831 }\hyper@anchorend
7832 }%
7833 \fi
7834 \unhbox\@labels
7835 \fi
7836 \if@nobreak
7837 \@nobreakfalse \clubpenalty\@M
7838 \else
7839 \clubpenalty\@clubpenalty \everypar{}%
7840 \fi
7841 }%
7842 }%

```

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

```

7843 {%
7844 \let\Hy@savethm\@thm
7845 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7846 }%
7847 }%
7848 }

```

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.

```

7849 \ifHy@hyperfootnotes
7850 \newcounter{Hfootnote}%
7851 \let\H@@footnotetext\@footnotetext
7852 \let\H@@footnotemark\@footnotemark
7853 \def\@xfootnotenext[#1]{%
7854 \begingroup
7855 \csname c@\@mpfn\endcsname #1\relax
7856 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7857 \endgroup
7858 \ifx\@footnotetext\@mpfootnotetext
7859 \expandafter\H@@mpfootnotetext
7860 \else
7861 \expandafter\H@@footnotetext
7862 \fi
7863 }%
7864 \def\@xfootnotemark[#1]{%
7865 \begingroup
7866 \c@footnote #1\relax
7867 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7868 \endgroup
7869 \H@@footnotemark
7870 }%

```

```

7871 \let\H@@mpfootnotetext\@mpfootnotetext
7872 \long\def\@mpfootnotetext#1{%
7873   \H@@mpfootnotetext{%
7874     \ifHy@nesting
7875       \expandafter\ltx@firstoftwo
7876     \else
7877       \expandafter\ltx@secondoftwo
7878     \fi
7879   {%
7880     \expandafter\hyper@@anchor\expandafter{%
7881       \Hy@footnote@currentHref
7882     }{#1}%
7883   }{%
7884     \Hy@raisedlink{%
7885       \expandafter\hyper@@anchor\expandafter{%
7886         \Hy@footnote@currentHref
7887       }{\relax}%
7888     }#1%
7889   }%
7890 }%
7891 }%
7892 \long\def\@footnotetext#1{%
7893   \H@@footnotetext{%
7894     \ifHy@nesting
7895       \expandafter\ltx@firstoftwo
7896     \else
7897       \expandafter\ltx@secondoftwo
7898     \fi
7899   {%
7900     \expandafter\hyper@@anchor\expandafter{%
7901       \Hy@footnote@currentHref
7902     }{#1}%
7903   }{%
7904     \Hy@raisedlink{%
7905       \expandafter\hyper@@anchor\expandafter{%
7906         \Hy@footnote@currentHref
7907       }{\relax}%
7908     }%
7909     \let\@currentHref\Hy@footnote@currentHref
7910     \let\@currentlabelname\@empty
7911     #1%
7912   }%
7913 }%
7914 }%

```

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.

```

7915 \def\@footnotemark{%
7916   \leavevmode
7917   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
7918   \stepcounter{Hfootnote}%
7919   \global\let\Hy@saved@currentHref\@currentHref
7920   \hyper@makecurrent{Hfootnote}%
7921   \global\let\Hy@footnote@currentHref\@currentHref

```

```

7922 \global\let\@currentHref\Hy@saved@currentHref
7923 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7924 \@makefnmark
7925 \hyper@linkend
7926 \ifhmode\spacefactor\@x@sf\fi
7927 \relax
7928 }%

```

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

```

7929 \@ifpackageloaded{tabularx}{%
7930 \let\HyOrg@TX@endtabularx\TX@endtabularx
7931 \def\Hy@tabularx@hook{%
7932 \let\@footnotetext\H@@footnotetext
7933 \let\@footnotemark\H@@footnotemark
7934 \let\@mpfootnotetext\H@@mpfootnotetext
7935 }%
7936 \begingroup
7937 \toks@\expandafter{\TX@endtabularx}%
7938 \xdef\Hy@gtemp{%
7939 \noexpand\Hy@tabularx@hook
7940 \the\toks@
7941 }%
7942 \endgroup
7943 \let\TX@endtabularx\Hy@gtemp
7944 }{}%

```

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

```

7945 \@ifpackageloaded{longtable}{%
7946 \CheckCommand*{\LT@p@ftntext}[1]{%
7947 \edef\@tempa{%
7948 \the\LT@p@ftn
7949 \noexpand\footnotetext[\the\c@footnote]%
7950 }%
7951 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7952 }%
7953 \long\def\LT@p@ftntext#1{%
7954 \edef\@tempa{%
7955 \the\LT@p@ftn
7956 \begingroup
7957 \noexpand\c@footnote=\the\c@footnote\relax
7958 \noexpand\protected@xdef\noexpand\@thefnmark{%
7959 \noexpand\thempfn
7960 }%
7961 \noexpand\Hy@LT@footnotetext{%
7962 \Hy@footnote@currentHref
7963 }%
7964 }%
7965 \global\LT@p@ftn\expandafter{%
7966 \@tempa{#1}%
7967 \endgroup
7968 }%
7969 }%
7970 \long\def\Hy@LT@footnotetext#1#2{%
7971 \H@@@footnotetext{%

```

```

7972 \ifHy@nesting
7973 \hyper@@anchor{#1}{#2}%
7974 \else
7975 \Hy@raisedlink{%
7976 \hyper@@anchor{#1}{\relax}%
7977 }%
7978 \def\@currentHref{#1}%
7979 \let\@currentlabelname\@empty
7980 #2%
7981 \fi
7982 }%
7983 }%
7984 }{}%

```

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

```

7985 \@ifpackageloaded{fancyvrb}{%
7986 \def\V@@footnotetext{%
7987 \insert\footins\bgroup
7988 \csize reset@font\endcsname
7989 \footnotesize
7990 \interlinepenalty\interfootnotelinepenalty
7991 \splittopskip\footnotesep
7992 \splitmaxdepth\dp\strutbox
7993 \floatingpenalty \@MM
7994 \hsize\columnwidth
7995 \@parboxrestore
7996 \edef\@currentlabel{\csize p@footnote\endcsname\@thefnmark}%
7997 \@makefnmark{}%
7998 \rule{\z@}{\footnotesep}%
7999 \bgroup
8000 \aftergroup\V@@@footnotetext
8001 \Hy@raisedlink{%
8002 \expandafter\hyper@@anchor\expandafter{%
8003 \Hy@footnote@currentHref
8004 }{\relax}%
8005 }%
8006 \let\@currentHref\Hy@footnote@currentHref
8007 \let\@currentlabelname\@empty
8008 \ignorespaces
8009 }%
8010 }{}%

```

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

```

8011 \def\Hy@temp#1{%
8012 \begingroup
8013 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8014 \endgroup
8015 \@footnotemark
8016 }%
8017 \ifx\Hy@temp\footref
8018 \def\footref#1{%
8019 \begingroup
8020 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8021 \endgroup
8022 \H@@@footnotemark
8023 }%
8024 \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.

```

8025 \let\HyOrg@maketitle\maketitle
8026 \def\maketitle{%
8027   \let\Hy@saved@footnotemark\@footnotemark
8028   \let\Hy@saved@footnotetext\@footnotetext
8029   \let\@footnotemark\H@@footnotemark
8030   \let\@footnotetext\H@@footnotetext
8031   \@ifnextchar[\Hy@maketitle@optarg{% ]
8032     \HyOrg@maketitle
8033     \Hy@maketitle@end
8034   }%
8035 }%
8036 \def\Hy@maketitle@optarg[#1]{%
8037   \HyOrg@maketitle[{#1}]%
8038   \Hy@maketitle@end
8039 }%
8040 \def\Hy@maketitle@end{%
8041   \ifx\@footnotemark\H@@footnotemark
8042     \let\@footnotemark\Hy@saved@footnotemark
8043   \fi
8044   \ifx\@footnotetext\H@@footnotetext
8045     \let\@footnotetext\Hy@saved@footnotetext
8046   \fi
8047 }%
```

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

```

8048 \def\realfootnote{%
8049   \@ifnextchar[\@xfootnote{%
8050     \stepcounter{\@mpfn}%
8051     \protected@xdef\@thefnmark{\thempfn}%
8052     \H@@@footnotemark\H@@@footnotetext
8053   }%
8054 }%

8055 \fi
8056 \Hy@DisableOption{hyperfootnotes}

8057 </package>
8058 <*check>
8059 \checklatex
8060 \checkcommand\def\@xfootnotenext[#1]{%
8061   \begingroup
8062     \csname c@\@mpfn\endcsname #1\relax
8063     \unrestored@protected@xdef\@thefnmark{\thempfn}%
8064   \endgroup
8065   \@footnotetext
8066 }
8067 \checkcommand\def\@xfootnotemark[#1]{%
8068   \begingroup
8069     \c@footnote #1\relax
8070     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
8071   \endgroup
8072   \@footnotemark
8073 }
8074 \checkcommand\def\@footnotemark{%
8075   \leavevmode
```

```

8076 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8077 \@makefnmark
8078 \ifhmode\spacefactor\@x@sf\fi
8079 \relax
8080 }
8081 </check>
8082 <*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.

```

8083 \def\caption{%
8084   \ifx\@captive\@undefined
8085     \@latex@error{\noexpand\caption outside float}\@ehd
8086     \expandafter\@gobble
8087   \else
8088     \H@refstepcounter\@captive
8089     \let\Hy@tempa\@caption
8090     \@ifundefined{float@caption}{%
8091       }{%
8092         \expandafter\ifx\csname @float@c@\@captive\endcsname
8093           \float@caption
8094         \let\Hy@tempa\Hy@float@caption
8095       \fi
8096     }%
8097     \expandafter\@firstofone
8098   \fi
8099   {\@dblarg{\Hy@tempa\@captive}}%
8100 }
8101 \long\def\@caption#1[#2]#3{%
8102   \expandafter\ifx\csname if@capstart\expandafter\endcsname
8103     \csname iftrue\endcsname
8104     \global\let\@currentHref\hc@currentHref
8105   \else
8106     \hyper@makecurrent{\@captive}%
8107   \fi
8108   \@ifundefined{NR@gettitle}{%
8109     \def\@currentlabelname{#2}%
8110   }{%
8111     \NR@gettitle{#2}%
8112   }%
8113   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8114     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8115   }%
8116   \begingroup
8117     \@parboxrestore
8118     \if@minipage
8119       \setminipage
8120     \fi
8121     \normalsize
8122     \expandafter\ifx\csname if@capstart\expandafter\endcsname
8123       \csname iftrue\endcsname
8124       \global\@capstartfalse
8125     \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8126   \else

```



```

8127 \makecaption{\csname fnum@#1\endcsname}{%
8128 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8129 \ifHy@nesting
8130 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
8131 \else
8132 \Hy@raisedlink{%
8133 \expandafter\hyper@@anchor\expandafter{%
8134 \@currentHref
8135 }{\relax}%
8136 }%
8137 #3%
8138 \fi
8139 }%
8140 \fi
8141 \par
8142 \endgroup
8143 }

```

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’.

```

8144 \let\Hy@float@caption\@caption
8145 \newcommand{\HyNew@float@makebox}[1]{%
8146 \HyOrg@float@makebox{%
8147 #1\relax
8148 \ifx\Hy@float@currentHref\@undefined
8149 \else
8150 \expandafter\hyper@@anchor\expandafter{%
8151 \Hy@float@currentHref
8152 }{\relax}%
8153 \global\let\Hy@float@currentHref\@undefined
8154 \fi
8155 }%
8156 }%
8157 \@ifpackageloaded{float}{%
8158 \def\Hy@float@caption{%
8159 \ifx\Hy@float@currentHref\@undefined
8160 \hyper@makecurrent{\@cuptype}%
8161 \global\let\Hy@float@currentHref\@currentHref
8162 \else
8163 \let\@currentHref\Hy@float@currentHref
8164 \fi
8165 \float@caption
8166 }%
8167 \let\HyOrg@float@makebox\float@makebox
8168 \let\float@makebox\HyNew@float@makebox
8169 }{}

8170 </package>
8171 <*check>
8172 \checklatex[1999/06/01 - 2000/06/01]
8173 \checkcommand\def\caption{%
8174 \ifx\@cuptype\@undefined
8175 \@latex@error{\noexpand\caption outside float}\@ehd
8176 \expandafter\@gobble

```

```

8177 \else
8178   \refstepcounter\@capttype
8179   \expandafter\@firstofone
8180 \fi
8181 {\@dblarg{\@caption\@capttype}}}%
8182 }
8183 \checkcommand\long\def\@caption#1[#2]#3{%
8184   \par
8185   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8186     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
8187   }%
8188   \begingroup
8189     \@parboxrestore
8190     \if@minipage
8191       \@setminipage
8192     \fi
8193     \normalsize
8194     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8195   \endgroup
8196 }
8197 </check>
8198 <*package>

```

38 Bibliographic references

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

However, 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.

```

8199 \def\hyper@natlinkstart#1{%
8200   \Hy@backout{#1}%
8201   \hyper@linkstart{cite}{cite.#1}%
8202   \def\hyper@nat@current{#1}%
8203 }
8204 \def\hyper@natlinkend{%
8205   \hyper@linkend
8206 }
8207 \def\hyper@natlinkbreak#1#2{%
8208   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8209 }
8210 \def\hyper@natanchorstart#1{%
8211   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8212 }
8213 \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.

```

8214 \ltx@ifundefined{NAT@parse}{%
8215   \providecommand*\@extra@binfo{}%
8216   \providecommand*\@extra@b@citeb{}%

```

```

8217 \def\bibcite#1#2{%
8218   \@newl@bel{b}{#1\@extra@binfo}{%
8219     \hyper@link[cite]{cite.#1\@extra@b@citeb}{#2}%
8220   }%
8221 }%
8222 \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.”.

```

8223 \let\Hy@bibcite\bibcite
8224 \begingroup
8225   \@ifundefined{bbl@cite@choice}{}{%
8226     \g@addto@macro\bbl@cite@choice{%
8227       \let\bibcite\Hy@bibcite
8228     }%
8229   }%
8230 \endgroup

```

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

```

8231 \providecommand*\@BIBLABEL{\@biblabel}%
8232 \def\@bibitem[#1]#2{%
8233   \@skiphyperreftrue
8234   \H@item[%
8235     \ifx\Hy@raisedlink\@empty
8236       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8237       \@BIBLABEL{#1}%
8238       \hyper@anchorend
8239     \else
8240       \Hy@raisedlink{%
8241         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8242       }%
8243       \@BIBLABEL{#1}%
8244     \fi
8245     \hfill
8246   ]%
8247   \@skiphyperreffalse
8248   \if@filesw
8249     \begingroup
8250       \let\protect\noexpand
8251       \immediate\write\@auxout{%
8252         \string\bibcite{#2}{#1}%
8253       }%
8254     \endgroup
8255   \fi
8256   \ignorespaces
8257 }%

```

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

```

8258 \def\@bibitem#1{%
8259   \@skiphyperreftrue\H@item\@skiphyperreffalse
8260   \Hy@raisedlink{%
8261     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8262   }%
8263   \if@filesw
8264     \begingroup
8265       \let\protect\noexpand
8266       \immediate\write\@auxout{%
8267         \string\bibcite{#1}{\the\value{\@listctr}}%

```

```

8268     }%
8269     \endgroup
8270     \fi
8271     \ignorespaces
8272 }%
8273 }{}

8274 </package>
8275 <*check>
8276 \checklatex
8277 \checkcommand\def\@lbibitem[#1]#2{%
8278   \item[\@biblabel{#1}\hfill]%
8279   \if@filesw
8280     {%
8281       \let\protect\noexpand
8282       \immediate\write\@auxout{%
8283         \string\bibcite{#2}{#1}%
8284       }%
8285     }%
8286   \fi
8287   \ignorespaces
8288 }
8289 \checkcommand\def\@bibitem#1{%
8290   \item
8291   \if@filesw
8292     \immediate\write\@auxout{%
8293       \string\bibcite{#1}{\the\value{\@listctr}}%
8294     }%
8295   \fi
8296   \ignorespaces
8297 }
8298 </check>
8299 <*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.

```

8300 \ifclassloaded{revtex}{%
8301   \Hy@Info{*** compatibility with revtex **** }%
8302   \def\revtex@checking#1#2{%
8303     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8304     \expandafter\def\csname b@#1\endcsname{#2}%
8305     \@SetMaxRnhefLabel{#1}%
8306     \expandafter\let\csname b@#1\endcsname\T@temp
8307   }%

```

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

```

8308 \ifundefined{CITE}{\def\CITE{\@cite}}{}%
8309 \providecommand*{\@extra@b@citeb}{}%
8310 \def\CITEX[#1]#2{%
8311   \let\@citea\@empty
8312   \leavevmode
8313   \unskip
8314   $\{ %
8315     \scriptstyle
8316     \@CITE{%
8317       \@for\@citeb:=#2\do{%

```

```

8318 \citea
8319 \def\citea{,\penalty\@m\ }%
8320 \edef\citeb{\expandafter\@firstofone\@citeb}%
8321 \if@filesw
8322 \immediate\write\@auxout{\string\citation{\@citeb}}%
8323 \fi
8324 \ifundefined{b@\@citeb\extra@b@citeb}{%
8325 \mbox{\reset@font\bfseries ?}%
8326 \G@refundefinedtrue
8327 \latex@warning{%
8328 Citation `'\@citeb' on page \thepage \space undefined%
8329 }%
8330 }{%
8331 {\csname b@\@citeb\extra@b@citeb\endcsname}%
8332 }%
8333 }%
8334 }{#1}%
8335 }$%
8336 }%

```

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

```

8337 \def\citex[#1]#2{%
8338 \let\citea\empty
8339 \cite{%
8340 \@for\citeb:=#2\do{%
8341 \citea
8342 \def\citea{,\penalty\@m\ }%
8343 \edef\citeb{\expandafter\@firstofone\@citeb}%
8344 \if@filesw
8345 \immediate\write\@auxout{\string\citation{\@citeb}}%
8346 \fi
8347 \ifundefined{b@\@citeb\extra@b@citeb}{%
8348 \mbox{\reset@font\bfseries ?}%
8349 \G@refundefinedtrue
8350 \latex@warning{%
8351 Citation `'\@citeb' on page \thepage \space undefined%
8352 }%
8353 }{%
8354 \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
8355 }%
8356 }%
8357 }{#1}%
8358 }%
8359 }{}

```

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 pdf_{TEX}, then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

8360 \ifpackageloaded{harvard}{%
8361 \Hy@AtBeginDocument{%

```

```

8362 \Hy@Info{*** compatibility with harvard **** }%
8363 \Hy@raiselinksfalse
8364 \def\harvardcite#1#2#3#4{%
8365   \global\@namedef{HAR@fn@#1}{\hyper@@link[cite]{}{cite.#1}{#2}}%
8366   \global\@namedef{HAR@an@#1}{\hyper@@link[cite]{}{cite.#1}{#3}}%
8367   \global\@namedef{HAR@yr@#1}{\hyper@@link[cite]{}{cite.#1}{#4}}%
8368   \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8369 }%
8370 \def\HAR@citetoaux#1{%
8371   \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8372   \ifHy@backref
8373     \ifx\@empty\@currentlabel
8374       \else
8375         \@bsphack
8376         \if@filesw
8377           \protected@write\@auxout{}{%
8378             \string\@writefile{brf}{%
8379               \string\backcite{#1}{%
8380                 {\thepage}{\@currentlabel}{\@currentHref}%
8381               }%
8382             }%
8383           }%
8384         \fi
8385         \@esphack
8386       \fi
8387     \fi
8388   }%
8389   \def\harvarditem{%
8390     \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
8391   }%
8392   \def\@harvarditem[#1]#2#3#4#5\par{%
8393     \item[]%
8394     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8395     \if@filesw
8396       \begingroup
8397       \def\protect##1{\string ##1\space}%
8398       \ifthenelse{\equal{#1}{\null}}{%
8399         {\def\next{{#4}{#2}{#2}{#3}}}%
8400         {\def\next{{#4}{#2}{#1}{#3}}}%
8401       \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8402       \endgroup
8403     \fi
8404     \protect\hspace*{-\labelwidth}%
8405     \protect\hspace*{-\labelsep}%
8406     \ignorespaces
8407     #5%
8408     \ifHy@backref
8409       \newblock
8410       \backref{\csname br@#4\endcsname}%
8411     \fi
8412     \par
8413   }%

```

\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:

```

8414 \long\def\HAR@checkcitations#1#2#3#4{%

```

```

8415 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8416 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8417 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8418 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8419 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8420 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8421 \else
8422 \@tempswatrue
8423 \fi
8424 \else
8425 \@tempswatrue
8426 \fi
8427 \else
8428 \@tempswatrue
8429 \fi
8430 }%
8431 }%
8432 }{}

```

38.2 Package chicago

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

```

8433 \@ifpackageloaded{chicago}{%

\citeN
8434 \def\citeN{%
8435 \def\@citesep{-1000}%
8436 \def\@cite##1##2{##1}%
8437 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8438 \@citedata@opt
8439 }%

\shortciteN
8440 \def\shortciteN{%
8441 \def\@citesep{-1000}%
8442 \def\@cite##1##2{##1}%
8443 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8444 \@citedata@opt
8445 }%

\@citedata@opt
8446 \def\@citedata@opt{%
8447 \let\@cite@opt\@empty
8448 \@ifnextchar [{%
8449 \@tempswatrue
8450 \@citedatax@opt
8451 }{%
8452 \@tempswafalse
8453 \@citedatax[]%
8454 }%
8455 }%

\@citedatax@opt
8456 \def\@citedatax@opt[#1]{%
8457 \def\@cite@opt{, #1}%
8458 \@citedatax[{#1}]%
8459 }%

```

8460 }{}

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.

```
8461 \ltx@ifclassloaded{slides}{%
8462   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8463   \def\Hy@PageAnchorSlidesPlain{%
8464     \advance\c@page\ltx@one
8465     \edef\Hy@TempPageAnchor{%
8466       \noexpand\hyper@@anchor{%
8467         page.\the\c@slide.\the\c@overlay.\the\c@note%
8468         \ifnum\c@page=\ltx@one
8469           \else
8470             .\the\c@page
8471           \fi
8472       }%
8473     }%
8474     \advance\c@page-\ltx@one
8475   }%
8476   \def\Hy@PageAnchorSlide{%
8477     \advance\c@page\ltx@one
8478     \ifnum\c@page>\ltx@one
8479       \ltx@ifundefined{theHpage}{%
8480         \protected@edef\Hy@TheSlideOptionalPage{%
8481           \Hy@SlidesFormatOptionalPage{thepage}%
8482         }%
8483       }{%
8484         \protected@edef\Hy@TheSlideOptionalPage{%
8485           \Hy@SlidesFormatOptionalPage{theHpage}%
8486         }%
8487       }%
8488     \else
8489       \def\Hy@TheSlideOptionalPage{}%
8490     \fi
8491     \advance\c@page-\ltx@one
8492     \pdfstringdef\@the@H@page{%
8493       \csname
8494         the%
8495         \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8496         \Hy@SlidesPage
8497       \endcsname
8498     \Hy@TheSlideOptionalPage
8499   }%
8500   \ltx@gobblethree
8501 }%
8502 \def\Hy@SlidesPage{slide}%
8503 \g@addto@macro\slide{%
8504   \def\Hy@SlidesPage{slide}%
8505 }%
8506 \g@addto@macro\overlay{%
```



```

8507 \def\Hy@SlidesPage{overlay}%
8508 }%
8509 \g@addto@macro\note{%
8510 \def\Hy@SlidesPage{note}%
8511 }%
8512 }{%
8513 \def\Hy@PageAnchorSlidesPlain{}%
8514 \def\Hy@PageAnchorSlide{}%
8515 }
8516 \def\Hy@EveryPageAnchor{%
8517 \Hy@DistillerDestFix
8518 \ifHy@pageanchor
8519 \ifHy@hypertextnames
8520 \ifHy@plainpages
8521 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8522 \Hy@PageAnchorSlidesPlain
8523 \else
8524 \begingroup
8525 \let\@number\@firstofone
8526 \Hy@unicodefalse
8527 \Hy@PageAnchorSlide
8528 \pdfstringdef\@the@H@page{\thepage}%
8529 \endgroup
8530 \EdefUnescapeString\@the@H@page{\@the@H@page}%
8531 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
8532 \fi
8533 \else
8534 \Hy@GlobalStepCount\Hy@pagecounter
8535 \def\Hy@TempPageAnchor{%
8536 \hyper@@anchor{page.\the\Hy@pagecounter}%
8537 }%
8538 \fi
8539 \vbox to 0pt{%
8540 \kern\voffset
8541 \kern\topmargin
8542 \kern-1bp\relax
8543 \hbox to 0pt{%
8544 \kern\hoffset
8545 \kern\ifodd\value{page}%
8546 \oddsidemargin
8547 \else
8548 \evensidemargin
8549 \fi
8550 \kern-1bp\relax
8551 \Hy@TempPageAnchor\relax
8552 \hss
8553 }%
8554 \vss
8555 }%
8556 \fi
8557 }
8558 \g@addto@macro\Hy@EveryPageBoxHook{%
8559 \Hy@EveryPageAnchor
8560 }

```

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.

```

8561 \def\addcontentsline#1#2#3{% toc extension, type, tag
8562   \begingroup
8563   \let\label\@gobble
8564   \ifx\@currentHref\@empty
8565     \Hy@Warning{%
8566       No destination for bookmark of \string\addcontentsline,%
8567       \MessageBreak destination is added%
8568     }%
8569   \phantomsection
8570   \fi
8571   \expandafter\ifx\csname toplevel@#2\endcsname\relax
8572     \begingroup
8573     \def\Hy@tempa{#1}%
8574     \ifx\Hy@tempa\Hy@bookmarkstype
8575       \Hy@WarningNoLine{%
8576         bookmark level for unknown #2 defaults to 0%
8577       }%
8578     \else
8579       \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8580     \fi
8581   \endgroup
8582   \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8583   \fi
8584   \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
8585   \Hy@writebookmark{\csname the#2\endcsname}%
8586     {#3}%
8587     {\@currentHref}%
8588     {\Hy@toplevel}%
8589     {#1}%
8590   \ifHy@verbose
8591     \begingroup
8592     \def\Hy@tempa{#3}%
8593     \@onelevel@sanitize\Hy@tempa
8594     \let\temp@online\on@line
8595     \let\on@line\@empty
8596     \Hy@Info{%
8597       bookmark\temp@online:\MessageBreak
8598       thecounter {\csname the#2\endcsname}\MessageBreak
8599       text {\Hy@tempa}\MessageBreak
8600       reference {\@currentHref}\MessageBreak
8601       toplevel {\Hy@toplevel}\MessageBreak
8602       type {#1}%
8603     }%
8604   \endgroup
8605   \fi
8606   \addtocontents{#1}{%
8607     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
8608   }%
8609 \endgroup
8610 }
```

`\contentsline` The page number might be empty. In this case the link for the page number is

suppressed to avoid little link boxes.

```

8611 \def\contentsline#1#2#3#4{%
8612   \begingroup
8613     \Hy@safe@activetrue
8614   \edef\x{\endgroup
8615     \def\noexpand\Hy@tocdestname{#4}%
8616   }\x
8617   \ifx\Hy@tocdestname\ltx@empty
8618     \csname l@#1\endcsname{#2}{#3}%
8619   \else
8620     \ifcase\Hy@linktoc % none
8621       \csname l@#1\endcsname{#2}{#3}%
8622     \or % section
8623       \csname l@#1\endcsname{%
8624         \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8625       }{#3}%
8626     \or % page
8627       \def\Hy@temp{#3}%
8628       \ifx\Hy@temp\ltx@empty
8629         \csname l@#1\endcsname{#2}{#3}%
8630       \else
8631         \csname l@#1\endcsname{{#2}}{%
8632           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8633         }%
8634       \fi
8635     \else % all
8636       \def\Hy@temp{#3}%
8637       \ifx\Hy@temp\ltx@empty
8638         \csname l@#1\endcsname{%
8639           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8640         }{}%
8641       \else
8642         \csname l@#1\endcsname{%
8643           \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8644         }{%
8645           \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8646         }%
8647       \fi
8648     \fi
8649   \fi
8650 }

8651 \</package>
8652 \<*check>
8653 \checklatex
8654 \checkcommand\def\addcontentsline#1#2#3{%
8655   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
8656 }
8657 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8658 \</check>
8659 \<*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.

```

8660 \let\H@definecounter\@definecounter
8661 \def\@definecounter#1{%
8662   \H@definecounter{#1}%
8663   \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8664 }

```

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.

```

8665 \let\H@newctr\@newctr
8666 \def\@newctr#1[#2]{%
8667   \H@newctr#1[{#2}]%
8668   \expandafter\gdef\csname theH#1\endcsname{%
8669     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
8670   }%
8671 }

```

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.

```

8672 \@ifpackageloaded{amsmath}{%
8673   \def\Hy@make@anchor{%
8674     \Hy@MakeCurrentHrefAuto{AMS}%
8675     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8676   }%
8677   \def\Hy@make@df@tag@@#1{%
8678     \gdef\df@tag{%
8679       \maketag@@@{\Hy@make@anchor#1}%
8680       \def\@currentlabel{#1}%
8681     }%
8682   }%
8683   \def\Hy@make@df@tag@@@#1{%
8684     \gdef\df@tag{%
8685       \tagform@{\Hy@make@anchor#1}%
8686       \toks@{\@xp{p@equation{#1}}}%
8687       \edef\@currentlabel{\the\toks@}%
8688     }%
8689   }%
8690   \let\HyOrg@make@df@tag@@\make@df@tag@@
8691   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8692   \let\make@df@tag@@\Hy@make@df@tag@@
8693   \let\make@df@tag@@@\Hy@make@df@tag@@@
8694 }{}

```

Only play with `\seteqlebal` if we are using pdf \TeX . Other drivers cause problems; requested by Michael Downes (AMS).

```

8695 \@ifpackagewith{hyperref}{pdf $\text{\TeX}$ }{%
8696   \let\H@seteqlabel\@seteqlabel
8697   \def\@seteqlabel#1{%
8698     \H@seteqlabel{#1}%
8699     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
8700     \Hy@raisedlink{%

```

```

8701 \hyper@anchorstart{\@currentHref}\hyper@anchorend
8702 }%
8703 }%
8704 }{}

```

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.

```

8705 \let\HyOrg@addtoreset\@addtoreset
8706 \def\@addtoreset#1#2{%
8707   \HyOrg@addtoreset{#1}{#2}%
8708   \expandafter\edef\csname theH#1\endcsname{%
8709     \expandafter\noexpand
8710     \csname the\@ifundefined{theH#2}{H#2}\endcsname
8711     .\noexpand\the\noexpand\value{#1}%
8712   }%
8713 }

```

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

```

8714 </package>
8715 <*check>
8716 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8717 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8718   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8719     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8720       \@addtoreset{#2}{#3}%
8721       \@xp\edef\csname the#2\endcsname{%
8722         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8723       }%
8724     }%
8725   }%
8726 }%
8727 </check>
8728 <*package>
8729 \ifpackageloaded{amsmath}{%
8730   \@ifpackagelater{amsmath}{1999/12/14}{%
8731     \renewcommand*\numberwithin[3][\arabic]{%
8732       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
8733         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
8734           \HyOrg@addtoreset{#2}{#3}%
8735           \@xp\edef\csname the#2\endcsname{%
8736             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
8737           }%

```

```

8738 \xp\xdef\csname theH#2\endcsname{%
8739 \xp\@nx
8740 \csname the\@ifundefined{theH#3}{H#3\endcsname
8741 \.\@nx#1{#2}%
8742 }%
8743 }%
8744 }%
8745 }%
8746 }{%
8747 \Hy@WarningNoLine{%
8748 \string\numberwithin\space of package `amsmath' %
8749 only fixed\MessageBreak
8750 for version 2000/06/06 v2.12 or newer%
8751 }%
8752 }%
8753 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8754 \ifHy@hyperfigures
8755 \let\Hy@Gin@setfile\Gin@setfile
8756 \def\Gin@setfile#1#2#3{%
8757 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8758 }%
8759 \fi
8760 \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.

```

8761 \ifHy@hyperindex
8762 \def\HyInd@ParenLeft{({}%
8763 \def\HyInd@ParenRight{)}}%
8764 \def\hyperindexformat#1#2{%
8765 \let\HyOrg@hyperpage\hyperpage
8766 \let\hyperpage\@firstofone
8767 #1{\HyOrg@hyperpage{#2}}%
8768 \let\hyperpage\HyOrg@hyperpage
8769 }%
8770 \Hy@nextfalse
8771 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8772 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8773 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8774 \begingroup
8775 \lccode`\|=\expandafter`\HyInd@EncapChar\relax

```

```

8776 \lccode`\/=``\relax
8777 \lowercase{\endgroup
8778 \ifHy@next
8779 \let\HyInd@org@wrindex\@wrindex
8780 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
8781 \def\HyInd@@wrindex#1#2|#3|#4\{\%
8782 \ifx\|#3\%
8783 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8784 \else
8785 \HyInd@@@wrindex{#1}{#2}#3\%
8786 \fi
8787 }%
8788 \def\HyInd@@@wrindex#1#2#3#4\{\%
8789 \def\Hy@temp@A{#3}%
8790 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8791 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8792 \relax
8793 \HyInd@org@wrindex{#1}{%
8794 #2|hyperindexformat{/#3#4}%
8795 }%
8796 \else
8797 \ifx\|#4\%
8798 \ifx\Hy@temp@A\HyInd@ParenRight
8799 \HyInd@org@wrindex{#1}{#2|#3}%
8800 \else
8801 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8802 \fi
8803 \else
8804 \HyInd@org@wrindex{#1}{%
8805 #2|#3hyperindexformat{/#4}%
8806 }%
8807 \fi
8808 \fi
8809 }%
8810 \else
8811 \def\@wrindex#1{\@wrindex#1||\}%
8812 \def\@wrindex#1|#2|#3\{\%
8813 \if@files
8814 \ifx\|#2\%
8815 \protected@write\@indexfile{\%
8816 \string\indexentry{#1|hyperpage}{\thepage}%
8817 }%
8818 \else
8819 \HyInd@@@wrindex{#1}#2\%
8820 \fi
8821 \fi
8822 \endgroup
8823 \@esphack
8824 }%
8825 \def\HyInd@@@wrindex#1#2#3\{\%
8826 \def\Hy@temp@A{#2}%
8827 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8828 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8829 \relax
8830 \protected@write\@indexfile{\%
8831 \string\indexentry{%
8832 #1|hyperindexformat{/#2#3}%

```

```

8833     }\thepage}%
8834  }%
8835 \else
8836   \ifx\#3\%
8837     \ifx\Hy@temp@A\HyInd@ParenRight
8838       \HyInd@DefKey{#1}%
8839       \ltx@ifundefined{HyInd@(\HyInd@key)}{%
8840         \let\Hy@temp\ltx@empty
8841       }{%
8842         \expandafter\let\expandafter\Hy@temp
8843         \csname HyInd@(\HyInd@key)\endcsname
8844       }%
8845       \protected@write\@indexfile{}{%
8846         \string\indexentry{#1|#2\Hy@temp}\thepage}%
8847     }%
8848   \else
8849     \protected@write\@indexfile{}{%
8850       \string\indexentry{#1|#2hyperpage}\thepage}%
8851     }%
8852     \HyInd@DefKey{#1}%
8853     \expandafter
8854     \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8855       hyperpage%
8856     }%
8857   \fi
8858 \else
8859   \protected@write\@indexfile{}{%
8860     \string\indexentry{%
8861       #1|#2hyperindexformat{/#3}%
8862     }\thepage}%
8863   }%
8864   \ifx\Hy@temp@A\HyInd@ParenLeft
8865     \HyInd@DefKey{#1}%
8866     \expandafter
8867     \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8868       hyperindexformat{/#3}%
8869     }%
8870   \fi
8871 \fi
8872 \fi
8873 }%
8874 \def\HyInd@DefKey#1{%
8875   \begingroup
8876   \let\protect\@unexpandable@protect
8877   \edef\Hy@temp{#1}%
8878   \ltx@onelevel@sanitize\Hy@temp
8879   \global\let\HyInd@key\Hy@temp
8880 \endgroup
8881 }%
8882 \fi
8883 }%
8884 \fi
8885 \Hy@DisableOption{hyperindex}
8886 \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.


```
8887 \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.

```
8888 \def\hyperpage#1{%
8889   \HyInd@hyperpage#1\nohyperpage{}\@nil
8890 }
8891 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8892   \HyInd@@hyperpage{#1}%
8893   #2%
8894   \def\Hy@temp{#3}%
8895   \ifx\Hy@temp\@empty
8896   \else
8897     \ltx@ReturnAfterFi{%
8898       \HyInd@hyperpage#3\@nil
8899     }%
8900   \fi
8901 }
8902 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8903 \def\@hyperpage#1--#2--#3\{\%
8904   \ifx\#2\%
8905     \@commahyperpage{#1}%
8906   \else
8907     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8908   \fi
8909 }
8910 \def\@commahyperpage#1{\@commahyperpage#1, \}
8911 \def\@commahyperpage#1, #2, #3\{\%
8912   \ifx\#2\%
8913     \HyInd@pagelink{#1}%
8914   \else
8915     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8916   \fi
8917 }
```

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

```
8918 \def\HyInd@pagelink#1{%
8919   \begingroup
8920   \toks@={}%
8921   \HyInd@removespaces#1 \@nil
8922   \endgroup
8923 }
8924 \def\HyInd@removespaces#1 #2\@nil{%
8925   \toks@=\expandafter{\the\toks@#1}%
8926   \ifx\#2\%
8927     \edef\x{\the\toks@}%
8928     \ifx\x\@empty
8929     \else
8930       \hyperlink{page.\the\toks@}{\the\toks@}%
8931     \fi
8932   \else
8933     \ltx@ReturnAfterFi{%
8934       \HyInd@removespaces#2\@nil
8935     }%
8936   \fi
8937 }
```

45 Compatibility with foiltex

```
8938 \@ifclassloaded{foils}{%
8939   \providecommand*\ext@table{lot}%
8940   \providecommand*\ext@figure{lof}%
8941 }{}
```

46 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (denis.girou@idris.fr).

```
8942 \@ifclassloaded{seminar}{%
8943   \Hy@seminarslidestrue
8944   \providecommand\theHslide{\arabic{slide}}}%
8945 }{%
8946   \Hy@seminarslidesfalse
8947 }
8948 \@ifpackageloaded{slidesec}{%
8949   \providecommand\theHslidesection {\arabic{slidesection}}%
8950   \providecommand\theHslidesubsection{%
8951     \theHslidesection.\arabic{slidesubsection}}%
8952 }%
8953 \def\slide@heading[#1]#2{%
8954   \H@refstepcounter{slidesection}%
8955   \@addtoreset{slidesubsection}{slidesection}%
8956   \addtocontents{los}{%
8957     \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8958     {\@SCTR}{slideheading.\theslidesection}}%
8959 }%
8960 \def\Hy@tempa{#2}%
8961 \ifx\Hy@tempa\@empty
8962   \else
8963     {%
8964       \edef\@currentlabel{%
8965         \csname p@slidesection\endcsname\theslidesection
8966       }%
8967       \makeslideheading{#2}%
8968     }%
8969   \fi
8970   \gdef\theslideheading{#1}%
8971   \gdef\theslidesubheading{}%
8972   \ifHy@bookmarksnumbered
8973     \def\Hy@slidetitle{\theslidesection\space #1}%
8974   \else
8975     \def\Hy@slidetitle{#1}%
8976   \fi
8977   \ifHy@hypertextnames
8978     \ifHy@naturalnames
8979       \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8980       \Hy@writebookmark
8981         {\theslidesection}%
8982         {\Hy@slidetitle}%
8983         {slideheading.\theslidesection}%
8984         {1}%
8985         {toc}%
8986     \else
8987       \hyper@@anchor{slideheading.\theHslidesection}{\relax}%

```

```

8988     \Hy@writebookmark
8989         {\theslidesection}%
8990         {\Hy@slidetitle}%
8991         {slideheading.\theHslidesection}%
8992         {1}%
8993         {toc}%
8994     \fi
8995 \else
8996     \Hy@GlobalStepCount\Hy@linkcounter
8997     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8998     \Hy@writebookmark
8999         {\theslidesection}%
9000         {\Hy@slidetitle}%
9001         {slideheading.\the\Hy@linkcounter}%
9002         {1}%
9003         {toc}%
9004     \fi
9005 }%
9006 \def\slide@subheading[#1]#2{%
9007     \H@refstepcounter{slidesubsection}%
9008     \addtocontents{los}{%
9009         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
9010         {\@SCTR}{slideheading.\theslidesubsection}%
9011     }%
9012     \def\Hy@tempa{#2}%
9013     \ifx\Hy@tempa\@empty
9014     \else
9015         {%
9016             \edef\@currentlabel{%
9017                 \csname p@slidesubsection\endcsname\theslidesubsection
9018             }%
9019             \makeslidesubheading{#2}%
9020         }%
9021     \fi
9022     \gdef\theslidesubheading{#1}%
9023     \ifHy@bookmarksnumbered
9024         \def\Hy@slidetitle{\theslidesubsection\space #1}%
9025     \else
9026         \def\Hy@slidetitle{#1}%
9027     \fi
9028     \ifHy@hypertextnames
9029         \ifHy@naturalnames
9030             \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
9031             \Hy@writebookmark
9032                 {\theslidesubsection}%
9033                 {\Hy@slidetitle}%
9034                 {slideheading.\theslidesubsection}%
9035                 {2}%
9036                 {toc}%
9037         \else
9038             \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
9039             \Hy@writebookmark
9040                 {\theslidesubsection}%
9041                 {\Hy@slidetitle}%
9042                 {slideheading.\theHslidesubsection}%
9043                 {2}%
9044                 {toc}%

```

```

9045 \fi
9046 \else
9047 \Hy@GlobalStepCount\Hy@linkcounter
9048 \hyper@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9049 \Hy@writebookmark
9050 {\theslidesubsection}%
9051 {\Hy@slidetitle}%
9052 {slideheading.\the\Hy@linkcounter}%
9053 {1}%
9054 {toc}%
9055 \fi
9056 }%
9057 \providecommand*{\listslidenam}{List of Slides}%
9058 \def\listofslides{%
9059 \section*{%
9060 \listslidenam
9061 \@mkboth{%
9062 \expandafter\MakeUppercase\listslidenam
9063 }{%
9064 \expandafter\MakeUppercase\listslidenam
9065 }%
9066 }%
9067 \def\l@slide##1##2##3##4{%
9068 \slide@undottedcline{%
9069 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
9070 }{%
9071 }%
9072 \let\l@subslide\l@slide
9073 \@startlos
9074 }%
9075 \def\slide@contents{%
9076 \def\l@slide##1##2##3##4{%
9077 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
9078 }%
9079 \let\l@subslide\@gobblefour
9080 \@startlos
9081 }%
9082 \def\Slide@contents{%
9083 \def\l@slide##1##2##3##4{%
9084 \ifcase\lslide@flag
9085 \message{##1 ** \the\c@slide@section}%
9086 \ifnum##1>\c@slide@section
9087 \def\lslide@flag{1}%
9088 {%
9089 \large
9090 \slide@ccline{%
9091 \slidenumberline{$\Rightarrow\bullet$}%
9092 {\hyperlink{##4}{##2}}%
9093 }{##3}%
9094 }%
9095 \else
9096 {%
9097 \large
9098 \slide@ccline{%
9099 \slidenumberline{$\surd\;\bullet$}%
9100 {\hyperlink{##4}{##2}}%
9101 }{##3}%

```

```

9102     }%
9103     \fi
9104   \or
9105     \def\lslide@flag{2}%
9106     {%
9107       \large
9108       \slide@cline{%
9109         \slidenumberline{$\bullet$}%
9110         {\hyperlink{###4}{##2}}}%
9111       }{##3}%
9112     }%
9113   \or
9114     {%
9115       \large
9116       \slide@cline{%
9117         \slidenumberline{$\bullet$}%
9118         {\hyperlink{###4}{##2}}}%
9119       }{##3}%
9120     }%
9121   \fi
9122 }%
9123 \def\l@subslide##1##2##3##4{%
9124   \ifnum\lslide@flag=1 %
9125     \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{###4}{##2}}{}%
9126   \fi
9127 }%
9128 \def\lslide@flag{0}%
9129 \@startlos
9130 }%
9131 }-{}

```

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.)

```

9132 \ifHy@texht
9133   \expandafter\endinput
9134 \fi
9135 \let\real@setref\@setref
9136 \def\@setref#1#2#3{% csname, extract group, refname
9137   \ifx#1\relax
9138     \protect\G@refundefinedtrue
9139     \nfss@text{\reset@font\bfseries ??}%
9140     \@latex@warning{%
9141       Reference `#3' on page \thepage \space undefined%
9142     }%
9143   \else
9144     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9145   \fi
9146 }

```

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

```

9147 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9148   \begingroup
9149   \toks0={\hyper@@link{#5}{#4}}%
9150   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9151   \edef\x{\endgroup
9152     \the\toks0 {\the\toks1 }%

```

```

9153 }%
9154 \x
9155 }
9156 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9157 \ifx#1\relax
9158 \protect\G@refundefinedtrue
9159 \nfss@text{\reset@font\bfseries ??}%
9160 \@latex@warning{%
9161 Reference `#3' on page \thepage \space undefined%
9162 }%
9163 \else
9164 \protect\hyper@@link
9165 {\expandafter\@fifthoffive#1}%
9166 {page.\expandafter\@secondoffive#1}%
9167 {\expandafter\@secondoffive#1}%
9168 \fi
9169 }
9170 </package>
9171 <*check>
9172 \checklatex
9173 \checkcommand\def\@setref#1#2#3{%
9174 \ifx#1\relax
9175 \protect\G@refundefinedtrue
9176 \nfss@text{\reset@font\bfseries ??}%
9177 \@latex@warning{%
9178 Reference `#3' on page \thepage \space undefined%
9179 }%
9180 \else
9181 \expandafter#2#1\null
9182 \fi
9183 }
9184 </check>
9185 <*package>

```

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

```

9186 \def\HyRef@StarSetRef#1{%
9187 \begingroup
9188 \Hy@safe@activestru
9189 \edef\x{#1}%
9190 \@onelevel@sanitize\x
9191 \edef\x{\endgroup
9192 \noexpand\HyRef@@StarSetRef
9193 \expandafter\noexpand\csname r@\x\endcsname{\x}%
9194 }%
9195 \x
9196 }
9197 \def\HyRef@@StarSetRef#1#2#3{%
9198 \ifx#1\@undefined
9199 \let#1\relax
9200 \fi
9201 \real@setref#1#3{#2}%
9202 }
9203 \def\@refstar#1{%
9204 \HyRef@StarSetRef{#1}\@firstoffive
9205 }
9206 \def\@pagerefstar#1{%

```

```

9207 \HyRef@StarSetRef{#1}\@secondoffive
9208 }
9209 \def\@namerefstar#1{%
9210 \HyRef@StarSetRef{#1}\@thirdoffive
9211 }
9212 \Hy@AtBeginDocument{%
9213 \ifpackageloaded{varioref}{%
9214 \def\@Refstar#1{%
9215 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9216 }%
9217 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9218 \MakeUppercase#1%
9219 }%
9220 \DeclareRobustCommand*\Ref{#1}{%
9221 \ifstar\@Refstar\HyRef@Ref
9222 }%
9223 \def\HyRef@Ref#1{%
9224 \hyperref[{#1}]{\Ref*{#1}}%
9225 }%
9226 \def\Vr@f#1{%
9227 \leavevmode\unskip\vref@space
9228 \hyperref[{#1}]{%
9229 \Ref*{#1}%
9230 \let\vref@space\nobreakspace
9231 \@vpageref[\unskip]{#1}%
9232 }%
9233 }%
9234 \def\vr@f#1{%
9235 \leavevmode\unskip\vref@space
9236 \begingroup
9237 \let\T@pageref\@pagerefstar
9238 \hyperref[{#1}]{%
9239 \ref*{#1}%
9240 \vpageref[\unskip]{#1}%
9241 }%
9242 \endgroup
9243 }%
9244 }{}%
9245 }
9246 \DeclareRobustCommand*\autopageref{%
9247 \ifstar{%
9248 \HyRef@autopagerefname\pageref*%
9249 }\HyRef@autopageref
9250 }
9251 \def\HyRef@autopageref#1{%
9252 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
9253 }
9254 \def\HyRef@autopagerefname{%
9255 \ltx@ifundefined{pageautorefname}{%
9256 \ltx@ifundefined{pagename}{%
9257 \Hy@Warning{No autoref name for `page'}%
9258 }{%
9259 \pagename\nobreakspace
9260 }%
9261 }{%
9262 \pageautorefname\nobreakspace
9263 }%

```

9264 }

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

```

9265 \DeclareRobustCommand*{\autoref}{%
9266   \leavevmode
9267   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9268 }
9269 \def\HyRef@autoref#1#2{%
9270   \begingroup
9271     \Hy@safe@activestrue
9272     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9273   \endgroup
9274 }
9275 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9276   \HyRef@ShowKeysRef{#2}%
9277   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9278   \edef\HyRef@thisref{%
9279     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9280   }%
9281   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9282   \Hy@safe@activesfalse
9283   #3{%
9284     \expandafter\@fifthoffive#1\@empty\@empty\@empty
9285   }{%
9286     \expandafter\@fourthoffive#1\@empty\@empty\@empty
9287   }{%
9288     \HyRef@currentHtag
9289     \expandafter\@firstoffive#1\@empty\@empty\@empty
9290     \null
9291   }%
9292   \else
9293     \protect\G@refundefinedtrue
9294     \nfss@text{\reset@font\bfseries ??}%
9295     \@latex@warning{%
9296       Reference `#2' on page \thepage\space undefined%
9297     }%
9298   \fi
9299 }
9300 \def\HyRef@testreftype#1.#2\.{%
9301   \ltx@ifundefined{#1autorefname}{%
9302     \ltx@ifundefined{#1name}{%
9303       \HyRef@StripStar#1\*\@nil{#1}%
9304       \ltx@ifundefined{\HyRef@name autorefname}{%
9305         \ltx@ifundefined{\HyRef@name name}{%
9306           \def\HyRef@currentHtag{%
9307             \Hy@Warning{No autoref name for `#1'}%
9308           }{%
9309             \edef\HyRef@currentHtag{%
9310               \expandafter\noexpand\csname\HyRef@name name\endcsname
9311               \noexpand~%
9312             }%
9313           }%
9314         }{%
9315           \edef\HyRef@currentHtag{%
9316             \expandafter\noexpand
9317             \csname\HyRef@name autorefname\endcsname
9318             \noexpand~%

```



```

9319     }%
9320   }%
9321 }{%
9322   \edef\HyRef@currentHtag{%
9323     \expandafter\noexpand\csname#1name\endcsname
9324     \noexpand~%
9325   }%
9326 }%
9327 }{%
9328   \edef\HyRef@currentHtag{%
9329     \expandafter\noexpand\csname#1autorefname\endcsname
9330     \noexpand~%
9331   }%
9332 }%
9333 }
9334 \def\HyRef@StripStar#1*\#2\@nil#3{%
9335   \def\HyRef@name{#2}%
9336   \ifx\HyRef@name\HyRef@CaseStar
9337     \def\HyRef@name{#1}%
9338   \else
9339     \def\HyRef@name{#3}%
9340   \fi
9341 }
9342 \def\HyRef@CaseStar{*\\}
9343 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

9344 \let\HyRef@ShowKeysRef\@gobble
9345 \def\HyRef@ShowKeysInit{%
9346   \begingroup\expandafter\expandafter\expandafter\endgroup
9347   \expandafter\ifx\csname SK@@label\endcsname\relax
9348   \else
9349     \ifx\SK@ref\@empty
9350     \else
9351       \def\HyRef@ShowKeysRef{%
9352         \SK@\SK@@ref
9353       }%
9354     \fi
9355   \fi
9356 }
9357 \@ifpackageloaded{showkeys}{%
9358   \HyRef@ShowKeysInit
9359 }{%
9360   \Hy@AtBeginDocument{%
9361     \@ifpackageloaded{showkeys}{%
9362       \HyRef@ShowKeysInit
9363     }{}%
9364   }%
9365 }

```

Defaults for the names that \autoref uses.

```

9366 \providecommand*\AMSautorefname{\equationautorefname}
9367 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9368 \providecommand*\Itemautorefname{\itemautorefname}
9369 \providecommand*\itemautorefname{item}
9370 \providecommand*\equationautorefname{Equation}

```

```

9371 \providecommand*\footnoteautorefname{footnote}
9372 \providecommand*\itemautorefname{item}
9373 \providecommand*\figureautorefname{Figure}
9374 \providecommand*\tableautorefname{Table}
9375 \providecommand*\partautorefname{Part}
9376 \providecommand*\appendixautorefname{Appendix}
9377 \providecommand*\chapterautorefname{chapter}
9378 \providecommand*\sectionautorefname{section}
9379 \providecommand*\subsectionautorefname{subsection}
9380 \providecommand*\subsubsectionautorefname{subsubsection}
9381 \providecommand*\paragraphautorefname{paragraph}
9382 \providecommand*\subparagraphautorefname{subparagraph}
9383 \providecommand*\FancyVerbLineautorefname{line}
9384 \providecommand*\theoremautorefname{Theorem}
9385 \providecommand*\pageautorefname{page}
9386 \end{package}

```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdfTeX offers `\pdfescapestring`.

```

9387 (*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)
9388 \begingroup\expandafter\expandafter\expandafter\endgroup
9389 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9390 \begingroup
9391 \catcode\| = 0 %
9392 \@makeother\| %
9393 \@firstofone{ \endgroup
9394 | def|Hy@pstringdef#1#2{%
9395 | \begingroup
9396 | \edef~{ |string~}%
9397 | \xdef|Hy@gtemp{#2}%
9398 | \endgroup
9399 | \let#1|Hy@gtemp
9400 | \@onelevel@sanitize#1%
9401 | \edef#1{ | \expandafter|Hy@ExchangeBackslash#1\|@nil}%
9402 | \edef#1{ | \expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
9403 | \edef#1{ | \expandafter|Hy@ExchangeRightParenthesis#1|@nil}%
9404 }%
9405 | def|Hy@ExchangeBackslash#1\#2|@nil{%
9406 #1%
9407 | ifx|\#2|\% %
9408 | else
9409 | \\\%
9410 | \ltx@ReturnAfterFi{%
9411 | Hy@ExchangeBackslash#2|@nil
9412 }%
9413 | fi
9414 }%

```

```

9415 }%
9416 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9417   #1%
9418   \ifx\|#2\%
9419   \else
9420     \@backslashchar(%
9421     \ltx@ReturnAfterFi{%
9422       \Hy@ExchangeLeftParenthesis#2\@nil
9423     }%
9424   \fi
9425 }%
9426 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9427   #1%
9428   \ifx\|#2\%
9429   \else
9430     \@backslashchar)%
9431     \ltx@ReturnAfterFi{%
9432       \Hy@ExchangeRightParenthesis#2\@nil
9433     }%
9434   \fi
9435 }%
9436 \else
9437 \def\Hy@pstringdef#1#2{%
9438   \begingroup
9439   \edef~{\string~}%
9440   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
9441   \endgroup
9442   \let#1\Hy@gtemp
9443 }%
9444 \fi
9445 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9446 <*pdfTeX>
9447 \providecommand*\XR@ext>{pdf}
9448 \Hy@setbreaklinks{true}
9449 \def\HyPat@ObjRef{%
9450   [0-9]*[1-9][0-9]* 0 R%
9451 }

```

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`

```

9452 \let\Hy@pdfminorversion\relax
9453 \begingroup\expandafter\expandafter\expandafter\endgroup
9454 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9455   \begingroup\expandafter\expandafter\expandafter\endgroup
9456   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9457   \else
9458     \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9459   \fi
9460 \else

```

```

9461 \def\Hy@pdfminorversion{\pdfminorversion}%
9462 \fi
9463 \@ifundefined{Hy@pdfminorversion}{%
9464   \PackageInfo{hyperref}{%
9465     PDF version is not set, because pdfTeX is too old (<1.10a)%
9466   }%
9467 }{%
9468   \ifHy@ocgcolorlinks
9469     \ifnum\Hy@pdfminorversion<5 %
9470       \kvsetkeys{Hyp}{pdfversion=1.5}%
9471     \fi
9472   \fi
9473   \ifHy@setpdfversion
9474     \ifnum\Hy@pdfversion<5 %
9475       \ltx@ifundefined{pdfobjcompresslevel}{%
9476         }{%
9477           \ifHy@verbose
9478             \Hy@InfoNoLine{%
9479               PDF object streams are disabled, because they are%
9480               \MessageBreak
9481               not supported in requested PDF version %
9482               1.\Hy@pdfversion
9483             }%
9484           \fi
9485           \pdfobjcompresslevel=\ltx@zero
9486         }%
9487       \fi
9488       \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9489       \else
9490         \let\Hy@temp\ltx@empty
9491         \def\Hy@temp@A#1#2{%
9492           \ifnum#1>\ltx@zero
9493             \edef\Hy@temp{%
9494               \Hy@temp
9495               \space\space
9496               \the#1\space #2%
9497             \ifnum#1=\ltx@one\else s\fi
9498             \MessageBreak
9499           }%
9500         \fi
9501       }%
9502       \Hy@temp@A\pdflastobj{PDF object}%
9503       \Hy@temp@A\pdflastxform{form XObject}%
9504       \Hy@temp@A\pdflastximage{image XObject}%
9505       \Hy@temp@A\pdflastannot{annotation}%
9506       \ltx@ifundefined{pdflastlink}{%
9507         }{%
9508           \Hy@temp@A\pdflastlink{link}%
9509         }%
9510       \ifx\Hy@temp\ltx@empty
9511         \Hy@pdfminorversion=\Hy@pdfversion\relax
9512       \else
9513         \let\Hy@temp@A\ltx@empty
9514         \ifnum\Hy@pdfversion=4 %
9515           \IfFileExists{pdf14.sty}{%
9516             \def\Hy@temp@A{%
9517               \MessageBreak

```

```

9518         Or \string\RequirePackage{pdf14} can be used%
9519         \MessageBreak
9520         before \string\documentclass\space as shortcut%
9521     }%
9522 }{}%
9523 \fi
9524 \Hy@WarningNoLine{%
9525     The PDF version number could not be set,\MessageBreak
9526     because some PDF objects are already written:%
9527     \MessageBreak
9528     \Hy@temp
9529     The version should be set as early as possible:%
9530     \MessageBreak
9531     \space\space
9532     \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9533     \string\relax
9534     \ifnum\Hy@pdfversion<5 %
9535         \ltx@ifundefined{pdfobjcompresslevel}{%
9536             }{%
9537                 \MessageBreak
9538                 \space\space
9539                 \string\pdfobjcompresslevel=0\string\relax
9540             }%
9541         }%
9542     \Hy@temp@A
9543 }%
9544 \fi
9545 \fi
9546 \PackageInfo{hyperref}{%
9547     \expandafter\string\Hy@pdfminorversion
9548     :=\number\Hy@pdfversion\space
9549 }%
9550 \fi
9551 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9552 }
9553 \Hy@DisableOption{pdfversion}%
9554 \ifHy@ocgcolorlinks
9555     \pdf@ifdraftmode{}{%
9556         \immediate\pdfobj{%
9557             <<%
9558             /Type/OCG%
9559             /Name(View)%
9560             /Usage<<%
9561             /Print<<%
9562             /PrintState/OFF%
9563             >>%
9564             /View<<%
9565             /ViewState/ON%
9566             >>%
9567             >>%
9568             >>%
9569         }%
9570         \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
9571         \immediate\pdfobj{%
9572             <<%
9573             /Type/OCG%
9574             /Name(Print)%

```

```

9575     /Usage<<%
9576     /Print<<%
9577         /PrintState/ON%
9578     >>%
9579     /View<<%
9580         /ViewState/OFF%
9581     >>%
9582     >>%
9583     >>%
9584 }%
9585 \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
9586 \immediate\pdfobj{%
9587     [%
9588     \OBJ@OCG@view\space\OBJ@OCG@print
9589     ]%
9590 }%
9591 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
9592 \pdfcatalog{%
9593     /OCProperties<<%
9594         /OCGs \OBJ@OCGs
9595     /D<<%
9596         /OFF[\OBJ@OCG@print]%
9597     /AS[%
9598         <<%
9599             /Event/View%
9600             /OCGs \OBJ@OCGs
9601             /Category[/View]%
9602         >>%
9603         <<%
9604             /Event/Print%
9605             /OCGs \OBJ@OCGs
9606             /Category[/Print]%
9607         >>%
9608         <<%
9609             /Event/Export%
9610             /OCGs \OBJ@OCGs
9611             /Category[/Print]%
9612         >>%
9613         ]%
9614     >>%
9615     >>%
9616 }%
9617 \begingroup
9618     \edef\x{\endgroup
9619     \pdfpageresources{%
9620         \the\pdfpageresources
9621         /Properties<<%
9622             /OCView \OBJ@OCG@view
9623             /OCPrint \OBJ@OCG@print
9624         >>%
9625     }%
9626 }%
9627 \x
9628 }%
9629 \Hy@AtBeginDocument{%
9630     \def\Hy@colorlink#1{%
9631         \begingroup

```

```

9632 \ifHy@ocgcolorlinks
9633 \def\Hy@ocgcolor{#1}%
9634 \setbox0=\hbox\bgroup\color@begingroup
9635 \else
9636 \HyColor@UseColor#1%
9637 \fi
9638 }%
9639 \def\Hy@endcolorlink{%
9640 \ifHy@ocgcolorlinks
9641 \color@endgroup\egroup
9642 \mbox{%
9643 \pdfliteral page{/OC/OCPrint BDC}%
9644 \rlap{\copy0}%
9645 \pdfliteral page{EMC/OC/OCView BDC}%
9646 \begingroup
9647 \expandafter\HyColor@UseColor\Hy@ocgcolor
9648 \box0 %
9649 \endgroup
9650 \pdfliteral page{EMC}%
9651 }%
9652 \fi
9653 \endgroup
9654 }%
9655 }%
9656 \else
9657 \Hy@DisableOption{ocgcolorlinks}%
9658 \fi

```

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

```

9659 \def\setpdfinkmargin#1{%
9660 \begingroup
9661 \setlength{\dimen@}{#1}%
9662 \expandafter\endgroup
9663 \expandafter\pdfinkmargin\the\dimen@\relax
9664 }
9665 \ifx\pdfstartlink\@undefined% less than version 14
9666 \let\pdfstartlink\pdfannotlink
9667 \let\pdfinkmargin\@tempdima
9668 \let\pdfxform\pdfform
9669 \let\pdflastxform\pdflastform
9670 \let\pdfrefxform\pdfrefform
9671 \else
9672 \pdfinkmargin1pt %
9673 \fi

```

First set up the default linking

```

9674 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

9675 \Hy@WrapperDef\new@pdfink#1{%
9676 \ifhmode
9677 \@savsf\spacefactor
9678 \fi
9679 \Hy@SaveLastskip
9680 \Hy@VerboseAnchor{#1}%
9681 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9682 \Hy@DestName\Hy@pstringDest\@pdfview
9683 \Hy@RestoreLastskip
9684 \ifhmode

```

```

9685 \spacefactor\@savsf
9686 \fi
9687 }
9688 \let\pdf@endanchor\@empty

```

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

```

9689 \def\Hy@DestName#1#2{%
9690 \pdfdest name{#1}#2\relax
9691 }

```

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.

```

9692 \providecommand*\@pdfborder{0 0 1}
9693 \providecommand*\@pdfborderstyle{}
9694 \def\Hy@undefinedname{UNDEFINED}
9695 \def\find@pdflink#1#2{%
9696 \leavevmode
9697 \protected@edef\Hy@testname{#2}%
9698 \ifx\Hy@testname\@empty
9699 \Hy@Warning{%
9700 Empty destination name,\MessageBreak
9701 using '\Hy@undefinedname'%
9702 }%
9703 \let\Hy@testname\Hy@undefinedname
9704 \else
9705 \Hy@pstringdef\Hy@testname{%
9706 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9707 }%
9708 \fi
9709 \Hy@StartlinkName{%
9710 \ifHy@pdfa /F 4\fi
9711 \Hy@setpdfborder
9712 \ifx\@pdfhighlight\@empty
9713 \else
9714 /H\@pdfhighlight
9715 \fi
9716 \ifx\CurrentBorderColor\relax
9717 \else
9718 /C[\CurrentBorderColor]%
9719 \fi
9720 }\Hy@testname
9721 \expandafter\Hy@colorlink\csname @#1color\endcsname
9722 }
9723 \def\Hy@StartlinkName#1#2{%
9724 \pdfstartlink attr{#1}goto name{#2}\relax
9725 }
9726 \def\close@pdflink{%
9727 \Hy@endcolorlink
9728 \Hy@VerboseLinkStop
9729 \pdfendlink
9730 }
9731 \def\hyper@anchor#1{%
9732 \new@pdflink{#1}\anchor@spot\pdf@endanchor
9733 }

```



```

9734 \def\hyper@anchorstart#1{%
9735   \new@pdfink{#1}%
9736   \Hy@activeanchortrue
9737 }
9738 \def\hyper@anchorend{%
9739   \pdf@endanchor
9740   \Hy@activeanchorfalse
9741 }
9742 \def\hyper@linkstart#1#2{%
9743   \Hy@VerboseLinkStart{#1}{#2}%
9744   \ltx@ifundefined{#1bordercolor}{%
9745     \let\CurrentBorderColor\relax
9746   }{%
9747     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9748   }%
9749   \find@pdfink{#1}{#2}%
9750 }
9751 \def\hyper@linkend{\close@pdfink}
9752 \def\hyper@link#1#2#3{%
9753   \Hy@VerboseLinkStart{#1}{#2}%
9754   \ltx@ifundefined{#1bordercolor}{%
9755     \let\CurrentBorderColor\relax
9756   }{%
9757     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9758   }%
9759   \find@pdfink{#1}{#2}#3\Hy@xspace@end
9760   \close@pdfink
9761 }
9762 \let\CurrentBorderColor\@linkbordercolor
9763 \def\hyper@linkurl#1#2{%
9764   \begingroup
9765     \Hy@pstringdef\Hy@pstringURI{#2}%
9766     \hyper@chars
9767     \leavevmode
9768     \pdfstartlink
9769     attr{%
9770       \Hy@setpdfborder
9771       \ifx\@pdfhighlight\@empty
9772       \else
9773         /H\@pdfhighlight
9774       \fi
9775       \ifx\@urlbordercolor\relax
9776       \else
9777         /C[\@urlbordercolor]%
9778       \fi
9779     }%
9780     user{%
9781       /Subtype/Link%
9782       \ifHy@pdfa /F 4\fi
9783       /A<<%
9784       /Type/Action%
9785       /S/URI%
9786       /URI(\Hy@pstringURI)%
9787       \ifHy@href@ismap
9788         /IsMap true%
9789       \fi
9790       \Hy@href@nextactionraw

```

```

9791     >>%
9792   }%
9793   \relax
9794   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9795   \close@pdflink
9796 \endgroup
9797 }
9798 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9799   \begingroup
9800   \def\Hy@pstringF{#2}%
9801   \Hy@CleanupFile\Hy@pstringF
9802   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9803   \Hy@pstringdef\Hy@pstringD{#3}%
9804   \Hy@MakeRemoteAction
9805   \leavevmode
9806   \pdfstartlink
9807   attr{%
9808     \Hy@setpdfborder
9809     \ifx\@pdfhighlight\@empty
9810     \else
9811       /H\@pdfhighlight
9812     \fi
9813     \ifx\@filebordercolor\relax
9814     \else
9815       /C[\@filebordercolor]%
9816     \fi
9817   }%
9818   user {%
9819     /Subtype/Link%
9820     \ifHy@pdfa /F 4\fi
9821     /A<<%
9822     /F(\Hy@pstringF)%
9823     /S/GoToR%
9824     \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}

```

```

9825     \ifx\#3\%
9826     /D[\Hy@href@page\@pdfremotestartview]%
9827   \else
9828     /D(\Hy@pstringD)%
9829   \fi
9830   \Hy@href@nextactionraw
9831   >>%
9832   }%
9833   \relax
9834   \Hy@colorlink\@filecolor#1\Hy@xspace@end
9835   \close@pdflink

```

```

9836 \endgroup
9837 }
9838 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
9839 \begingroup
9840 \Hy@pstringdef\Hy@pstringF{#1}%
9841 \Hy@pstringdef\Hy@pstringP{#3}%
9842 \leavevmode
9843 \pdfstartlink
9844 attr{%
9845 \Hy@setpdfborder
9846 \ifx\@pdfhighlight\@empty
9847 \else
9848 /H\@pdfhighlight
9849 \fi
9850 \ifx\@runbordercolor\relax
9851 \else
9852 /C\@runbordercolor}%
9853 \fi
9854 }%
9855 user {%
9856 /Subtype/Link%
9857 \ifHy@pdfa /F 4\fi
9858 /A<<%
9859 /F(\Hy@pstringF)%
9860 /S/Launch%
9861 \Hy@SetNewWindow
9862 \ifx\|#3\|%
9863 \else
9864 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9865 \fi
9866 \Hy@href@nextactionraw
9867 >>%
9868 }%
9869 \relax
9870 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9871 \close@pdflink
9872 \endgroup
9873 }

```

\@pdfproducer

```

9874 \ifx\@pdfproducer\relax
9875 \begingroup\expandafter\expandafter\expandafter\endgroup
9876 \expandafter\ifx\csname luatexversion\endcsname\relax
9877 \def\@pdfproducer{pdfTeX}%
9878 \ifx\eTeXversion\@undefined
9879 \else
9880 \ifx\eTeXversion\relax
9881 \else
9882 \ifnum\eTeXversion>0 %
9883 \def\@pdfproducer{pdfTeX}%
9884 \fi
9885 \fi
9886 \fi
9887 \ifx\pdfTeXversion\@undefined
9888 \else
9889 \ifnum\pdfTeXversion<100 %
9890 \edef\@pdfproducer{%

```

```

9891 \pdfproducer
9892 \the\pdfTeXversion.\pdfTeXrevision
9893 }%
9894 \else
9895 \ifnum\pdfTeXversion<130 %
9896 \edef\pdfproducer{%
9897 \pdfproducer-%
9898 \expandafter\car\the\pdfTeXversion\empty\nil.%
9899 \expandafter\cdr\the\pdfTeXversion\empty\nil
9900 \pdfTeXrevision
9901 }%
9902 \else
9903 \ifnum\pdfTeXversion<140 %
9904 \else
9905 \def\pdfproducer{pdfTeX}%
9906 \fi
9907 \edef\pdfproducer{%
9908 \pdfproducer-%
9909 \expandafter\car\the\pdfTeXversion\empty\nil.%
9910 \expandafter\cdr\the\pdfTeXversion\empty\nil.%
9911 \pdfTeXrevision
9912 }%
9913 \fi
9914 \fi
9915 \fi
9916 \else
9917 \begingroup
9918 \count@=\luaTeXversion
9919 \divide\count@ by 100 %
9920 \edef\x{\the\count@}%
9921 \count@=-\x\relax
9922 \multiply\count@ by 100 %
9923 \advance\count@ by \luaTeXversion
9924 \edef\x{\endgroup
9925 \def\noexpand\pdfproducer{%
9926 LuaTeX-\x.\the\count@.\luaTeXrevision
9927 }%
9928 }%
9929 \x
9930 \fi
9931 \fi

```

\PDF@SetupDox

```

9932 \def\PDF@SetupDoc{%
9933 \ifx\pdfpagescrop\empty
9934 \else
9935 \edef\process@me{%
9936 \pdfpagesattr=%
9937 /CropBox[\pdfpagescrop]%
9938 \expandafter\ifx\expandafter\the\pdfpagesattr\%
9939 \else
9940 ^^J\the\pdfpagesattr
9941 \fi
9942 }%
9943 }%
9944 \process@me
9945 \fi
9946 \Hy@pstringdef\Hy@pstringB{\@baseurl}%

```

```

9947 \pdfcatalog{%
9948 /PageMode/\@pdfpagemode
9949 \ifx\@baseurl\@empty
9950 \else
9951 /URI<</Base(\Hy@pstringB)>>%
9952 \fi
9953 }%
9954 \ifx\@pdfstartpage\@empty
9955 \else
9956 \ifx\@pdfstartview\@empty
9957 \else
9958 openaction goto page\@pdfstartpage{\@pdfstartview}%
9959 \fi
9960 \fi
9961 \edef\Hy@temp{%
9962 \ifHy@pdftoolbar\else /HideToolbar true\fi
9963 \ifHy@pdfmenubar\else /HideMenubar true\fi
9964 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9965 \ifHy@pdfwindow /FitWindow true\fi
9966 \ifHy@pdfcenterwindow /CenterWindow true\fi
9967 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9968 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9969 \Hy@UseNameKey{Direction}\@pdfdirection
9970 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9971 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9972 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9973 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9974 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9975 \Hy@UseNameKey{Duplex}\@pdfduplex
9976 \ifx\@pdfpicktraybypdfsize\@empty
9977 \else
9978 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9979 \fi
9980 \ifx\@pdfprintpagerange\@empty
9981 \else
9982 /PrintPageRange[\@pdfprintpagerange]%
9983 \fi
9984 \ifx\@pdfnumcopies\@empty
9985 \else
9986 /NumCopies \@pdfnumcopies
9987 \fi
9988 }%
9989 \pdfcatalog{%
9990 \ifx\Hy@temp\@empty
9991 \else
9992 /ViewerPreferences<<\Hy@temp>>%
9993 \fi
9994 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9995 \ifx\@pdflang\relax
9996 \else
9997 /Lang(\@pdflang)%
9998 \fi
9999 }%
10000 }

```

\PDF@FinishDoc

```

10001 \def\PDF@FinishDoc{%
10002 \pdf@ifdraftmode{}\@empty

```

```

10003 \Hy@UseMaketitleInfos
10004 \HyInfo@GenerateAddons
10005 \pdfinfo{%
10006   /Author(\@pdfauthor)%
10007   /Title(\@pdftitle)%
10008   /Subject(\@pdfsubject)%
10009   /Creator(\@pdfcreator)%
10010   \ifx\@pdfcreationdate\@empty
10011   \else
10012     /CreationDate(\@pdfcreationdate)%
10013   \fi
10014   \ifx\@pdfmoddate\@empty
10015   \else
10016     /ModDate(\@pdfmoddate)%
10017   \fi
10018   \ifx\@pdfproducer\relax
10019   \else
10020     /Producer(\@pdfproducer)%
10021   \fi
10022   /Keywords(\@pdfkeywords)%
10023   \ifx\@pdftrapped\@empty
10024   \else
10025     /Trapped/\@pdftrapped
10026   \fi
10027   \HyInfo@Addons
10028 }%
10029 }%
10030 \Hy@DisableOption{pdfauthor}%
10031 \Hy@DisableOption{pdftitle}%
10032 \Hy@DisableOption{pdfsubject}%
10033 \Hy@DisableOption{pdfcreator}%
10034 \Hy@DisableOption{pdfcreationdate}%
10035 \Hy@DisableOption{pdfmoddate}%
10036 \Hy@DisableOption{pdfproducer}%
10037 \Hy@DisableOption{pdfkeywords}%
10038 \Hy@DisableOption{pdftrapped}%
10039 \Hy@DisableOption{pdfinfo}%
10040 }

```

`\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`.

```

10041 \def\hyper@pagetransition{%
10042   \ifx\@pdfpagetransition\relax
10043   \else
10044     \expandafter\Hy@RemoveTransPageAttr
10045     \the\pdfpageattr^^J/Trans{}}>>\END
10046   \ifx\@pdfpagetransition\@empty
10047   \else
10048     \edef\@processme{%
10049       \global\pdfpageattr{%
10050         \the\pdfpageattr
10051         ^^J/Trans << /S /\@pdfpagetransition\space >>%
10052       }%
10053     }%
10054     \@processme
10055   \fi

```

```

10056 \fi
10057 }

```

`\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.

```

10058 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10059 \ifx\#2\%
10060 \global\pdfpageattr{#1}%
10061 \else
10062 \Hy@RemoveTransPageAttr#1#4\END
10063 \fi
10064 }

```

`\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`.

```

10065 \def\hyper@pageduration{%
10066 \ifx\@pdfpageduration\relax
10067 \else
10068 \expandafter
10069 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
10070 \ifx\@pdfpageduration\@empty
10071 \else
10072 \edef\@processme{%
10073 \global\pdfpageattr{%
10074 \the\pdfpageattr
10075 ^^J/Dur \@pdfpageduration\space
10076 }%
10077 }%
10078 \@processme
10079 \fi
10080 \fi
10081 }

```

`\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.

```

10082 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10083 \ifx\#2\%
10084 \global\pdfpageattr{#1}%
10085 \else
10086 \Hy@RemoveDurPageAttr#1#4\END
10087 \fi
10088 }

```

`\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).

```

10089 \def\hyper@pagehidden{%
10090 \ifHy@useHidKey
10091 \expandafter
10092 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END

```

```

10093 \ifHy@pdfpagehidden
10094 \edef\@processme{%
10095   \global\pdfpageattr{%
10096     \the\pdfpageattr
10097     ^^J/Hid true % SPACE
10098   }%
10099 }%
10100 \@processme
10101 \fi
10102 \fi
10103 }

```

`\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.

```

10104 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10105   \ifx\#2\%
10106     \global\pdfpageattr{#1}%
10107   \else
10108     \Hy@RemoveHidPageAttr#1#4\END
10109   \fi
10110 }

10111 \pdf@ifdraftmode{}{%
10112   \g@addto@macro\Hy@EveryPageHook{%
10113     \hyper@pagetransition
10114     \hyper@pageduration
10115     \hyper@pagehidden
10116   }%
10117 }

```

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

```

10118 </pdftex>
10119 <*pdftex | xetex>
10120 \Hy@AtBeginDocument{%
10121   \ifHy@setpagesize
10122     \expandafter\@firstofone
10123   \else
10124     \expandafter\@gobble
10125   \fi
10126   {%
10127     \@ifclassloaded{seminar}{%
10128 <*pdftex>
10129       \setlength{\pdfhorigin}{1truein}%
10130       \setlength{\pdfvorigin}{1truein}%
10131 </pdftex>
10132     \ifportrait
10133       \ifdim\paperwidth=\z@
10134       \else
10135         \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10136       \fi
10137       \ifdim\paperheight=\z@
10138       \else
10139         \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10140       \fi
10141     \else

```



```

10142 \ifdim\paperheight=\z@
10143 \else
10144 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10145 \fi
10146 \ifdim\paperwidth=\z@
10147 \else
10148 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10149 \fi
10150 \fi
10151 }{%
10152 \ltx@ifundefined{stockwidth}{%
10153 \ifdim\paperwidth>\z@
10154 \setlength{\pdfpagewidth}{\paperwidth}%
10155 \fi
10156 \ifdim\paperheight>\z@
10157 \setlength{\pdfpageheight}{\paperheight}%
10158 \fi
10159 }{%
10160 \ifdim\stockwidth>\z@
10161 \setlength{\pdfpagewidth}{\stockwidth}%
10162 \fi
10163 \ifdim\stockheight>\z@
10164 \setlength{\pdfpageheight}{\stockheight}%
10165 \fi
10166 }%
10167 }%
10168 }%
10169 \Hy@DisableOption{setpagesize}%
10170 }
10171 </pdftex | xetex>
10172 <*pdftex>
10173 \def\Acrobatmenu#1#2{%
10174 \Hy@Acrobatmenu{#1}{#2}{%
10175 \leavevmode
10176 \EdefEscapeName\Hy@temp@menu{#1}%
10177 \pdfstartlink
10178 attr{%
10179 \Hy@setpdfborder
10180 \ifx\@pdfhighlight\@empty
10181 \else
10182 /H\@pdfhighlight
10183 \fi
10184 \ifx\@menubordercolor\relax
10185 \else
10186 /C[\@menubordercolor]%
10187 \fi
10188 }%
10189 user{%
10190 /Subtype/Link%
10191 \ifHy@pdfa /F 4\fi
10192 /A<<%
10193 /S/Named%
10194 /N/\Hy@temp@menu
10195 \Hy@href@nextactionraw
10196 >>%
10197 }%
10198 \relax

```

```

10199 \Hy@colorlink\@menucolor#2%
10200 \close@pdfink
10201 }%
10202 }

```

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.

```

10203 \def\Hy@FixNotFirstPage{%
10204   \gdef\Hy@FixNotFirstPage{%
10205     \setbox\AtBeginShipoutBox=\hbox{%
10206       \copy\AtBeginShipoutBox
10207     }%
10208   }%
10209 }
10210 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%
10211 }{%
10212   \AtBeginShipout{\Hy@FixNotFirstPage}%
10213 }
10214 </pdfTeX>

```

47.3 hypertex

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with

a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

10215 \*hypertext
10216 \providecommand*\XR@ext\{dvi}
10217 \let\PDF@FinishDoc\ltx@empty
10218 \def\PDF@SetupDoc{%
10219   \ifx\@baseurl\@empty
10220   \else
10221     \special{html:<base href="\@baseurl">}%
10222   \fi
10223 }
10224 \Hy@WrapperDef\hyper@anchor#1{%
10225   \Hy@SaveLastskip
10226   \Hy@VerboseAnchor{#1}%
10227   \begingroup
10228     \let\protect=\string
10229     \hyper@chars
10230     \special{html:<a name=%
10231       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10232   \endgroup
10233   \Hy@activeanchortrue
10234   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10235   \special{html:</a>}%
10236   \Hy@activeanchorfalse
10237   \Hy@RestoreLastskip
10238 }
10239 \Hy@WrapperDef\hyper@anchorstart#1{%
10240   \Hy@SaveLastskip
10241   \Hy@VerboseAnchor{#1}%
10242   \begingroup
10243     \hyper@chars
10244     \special{html:<a name=%
10245       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10246   \endgroup
10247   \Hy@activeanchortrue
10248 }
10249 \def\hyper@anchorend{%
10250   \special{html:</a>}%
10251   \Hy@activeanchorfalse
10252   \Hy@RestoreLastskip
10253 }
10254 \def\@urltype{url}
10255 \def\hyper@linkstart#1#2{%
10256   \Hy@VerboseLinkStart{#1}{#2}%
10257   \expandafter\Hy@colorlink\csname @#1color\endcsname
10258   \def\Hy@tempa{#1}%
10259   \ifx\Hy@tempa\@urltype
10260     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10261   \else
10262     \begingroup
10263       \hyper@chars
10264       \special{html:<a href=%

```

```

10265     \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10266   \endgroup
10267 \fi
10268 }
10269 \def\hyper@linkend{%
10270   \special{html:</a>}}%
10271   \Hy@endcolorlink
10272 }
10273 \def\hyper@linkfile#1#2#3{%
10274   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10275 }
10276 \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.

```

10277 \leavevmode
10278 \ifHy@raiselinks
10279   \Hy@SaveSpaceFactor
10280   \Hy@SaveSavedSpaceFactor
10281   \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10282   \Hy@RestoreSavedSpaceFactor
10283   \@linkdim\dp\@tempboxa
10284   \lower\@linkdim\hbox{%
10285     \hyper@chars
10286     \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10287   }%
10288   \Hy@colorlink\@urlcolor
10289   \Hy@RestoreSpaceFactor
10290   #1%
10291   \Hy@SaveSpaceFactor
10292   \@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).

```

10293   \advance\@linkdim by -6.5\p@
10294   \raise\@linkdim\hbox{\special{html:</a>}}}%
10295   \Hy@endcolorlink
10296   \Hy@RestoreSpaceFactor
10297 \else
10298   \begingroup
10299   \hyper@chars
10300   \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
10301   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10302   \special{html:</a>}}%
10303   \Hy@endcolorlink
10304 \endgroup
10305 \fi
10306 }

```

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

```

10307 \def\hyper@link#1#2#3{%
10308   \Hy@VerboseLinkStart{#1}{#2}%
10309   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}}%
10310 }
10311 \def\hyper@image#1#2{%
10312   \begingroup

```

```

10313 \hyper@chars
10314 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10315 \endgroup
10316 }
10317 </hypertex>
10318 <*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.

```

10319 \providecommand*\XR@ext}{dvi}
10320 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10321 \Hy@WrapperDef\hyper@anchor#1{%
10322 \Hy@SaveLastskip
10323 \Hy@VerboseAnchor{#1}%
10324 \begingroup
10325 \let\protect=\string
10326 \special{mark: #1}%
10327 \endgroup
10328 \Hy@activeanchortrue
10329 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10330 \Hy@activeanchorfalse
10331 \Hy@RestoreLastskip
10332 }
10333 \Hy@WrapperDef\hyper@anchorstart#1{%
10334 \Hy@SaveLastskip
10335 \Hy@VerboseAnchor{#1}%
10336 \special{mark: #1}%
10337 \Hy@activeanchortrue
10338 }
10339 \def\hyper@anchorend{%
10340 \Hy@activeanchorfalse
10341 \Hy@RestoreLastskip
10342 }
10343 \def\hyper@linkstart#1#2{%
10344 \Hy@VerboseLinkStart{#1}{#2}%
10345 \expandafter\Hy@colorlink\csname @#1color\endcsname
10346 \special{button: %
10347 10000000 %
10348 \number\baselineskip\space
10349 #2%
10350 }%
10351 }
10352 \def\hyper@linkend{%
10353 \Hy@endcolorlink
10354 }

```

```

10355 \def\hyper@link#1#2#3{%
10356   \Hy@VerboseLinkStart{#1}{#2}%
10357   \leavevmode
10358   \ifHy@raiselinks
10359     \Hy@SaveSpaceFactor
10360     \Hy@SaveSavedSpaceFactor
10361     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10362     \Hy@RestoreSavedSpaceFactor
10363     \@linkdim\dp\@tempboxa
10364     \lower\@linkdim\hbox{%
10365       \special{button: %
10366         \number\wd\@tempboxa\space
10367         \number\ht\@tempboxa\space
10368         #2%
10369       }%
10370     \expandafter\Hy@colorlink\csname @#1color\endcsname
10371     \Hy@RestoreSpaceFactor
10372     #3\Hy@xspace@end
10373     \Hy@SaveSpaceFactor
10374     \Hy@endcolorlink
10375   }%
10376   \@linkdim\ht\@tempboxa
10377   \advance\@linkdim by -6.5\p@
10378   \raise\@linkdim\hbox{}%
10379   \Hy@RestoreSpaceFactor
10380 \else
10381   \special{button: %
10382     \number\wd\@tempboxa\space
10383     \number\ht\@tempboxa\space
10384     #2%
10385   }%
10386   \expandafter\Hy@colorlink\csname @#1color\endcsname
10387   #3\Hy@xspace@end
10388   \Hy@endcolorlink
10389 \fi
10390 }
10391 \def\hyper@linkurl#1#2{%
10392   \begingroup
10393   \hyper@chars
10394   \leavevmode
10395   \ifHy@raiselinks
10396     \Hy@SaveSpaceFactor
10397     \Hy@SaveSavedSpaceFactor
10398     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10399     \Hy@RestoreSavedSpaceFactor
10400     \@linkdim\dp\@tempboxa
10401     \lower\@linkdim\hbox{%
10402       \special{button: %
10403         \number\wd\@tempboxa\space
10404         \number\ht\@tempboxa\space
10405         launch: \wwwbrowser\space
10406         #2%
10407       }%
10408     \Hy@colorlink\@urlcolor
10409     \Hy@RestoreSpaceFactor
10410     #1\Hy@xspace@end
10411     \Hy@SaveSpaceFactor

```

```

10412 \Hy@endcolorlink
10413 }%
10414 \@linkdim\ht\@tempboxa
10415 \advance\@linkdim by -6.5\p@
10416 \raise\@linkdim\hbox{}%
10417 \Hy@RestoreSpaceFactor
10418 \else
10419 \special{button: %
10420 \number\wd\@tempboxa\space
10421 \number\ht\@tempboxa\space
10422 launch: \wwwbrowser\space
10423 #2%
10424 }%
10425 \Hy@colorlink\@urlcolor
10426 #1\Hy@xspace@end
10427 \Hy@endcolorlink
10428 \fi
10429 \endgroup
10430 }
10431 \def\hyper@linkfile#1#2#3{%
10432 \begingroup
10433 \hyper@chars
10434 \leavevmode
10435 \ifHy@raiselinks
10436 \Hy@SaveSpaceFactor
10437 \Hy@SaveSavedSpaceFactor
10438 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10439 \Hy@RestoreSavedSpaceFactor
10440 \@linkdim\dp\@tempboxa
10441 \lower\@linkdim\hbox{%
10442 \special{button: %
10443 \number\wd\@tempboxa\space
10444 \number\ht\@tempboxa\space
10445 #3,%
10446 file: #2%
10447 }%
10448 \Hy@colorlink\@filecolor
10449 \Hy@RestoreSpaceFactor
10450 #1\Hy@xspace@end
10451 \Hy@SaveSpaceFactor
10452 \Hy@endcolorlink
10453 }%
10454 \@linkdim\ht\@tempboxa
10455 \advance\@linkdim by -6.5\p@
10456 \raise\@linkdim\hbox{}%
10457 \Hy@RestoreSpaceFactor
10458 \else
10459 \special{button: %
10460 \number\wd\@tempboxa\space
10461 \number\ht\@tempboxa\space
10462 #3,%
10463 file: #2%
10464 }%
10465 \Hy@colorlink\@filecolor
10466 #1\Hy@xspace@end
10467 \Hy@endcolorlink
10468 \fi

```

```

10469 \endgroup
10470 }
10471 \ifx\@pdfproducer\relax
10472 \def\@pdfproducer{dviwindo + Distiller}%
10473 \fi
10474 \HyInfo@AddonUnsupportedtrue
10475 \def\PDF@FinishDoc{%
10476 \Hy@UseMaketitleInfos
10477 \HyInfo@TrappedUnsupported
10478 \special{PDF: Keywords \@pdfkeywords}%
10479 \special{PDF: Title \@pdftitle}%
10480 \special{PDF: Creator \@pdfcreator}%
10481 \ifx\@pdfcreationdate\@empty
10482 \else
10483 \special{PDF: CreationDate \@pdfcreationdate}%
10484 \fi
10485 \ifx\@pdfmoddate\@empty
10486 \else
10487 \special{PDF: ModDate \@pdfmoddate}%
10488 \fi
10489 \special{PDF: Author \@pdfauthor}%
10490 \ifx\@pdfproducer\relax
10491 \else
10492 \special{PDF: Producer \@pdfproducer}%
10493 \fi
10494 \special{PDF: Subject \@pdfsubject}%
10495 \Hy@DisableOption{pdfauthor}%
10496 \Hy@DisableOption{pdftitle}%
10497 \Hy@DisableOption{pdfsubject}%
10498 \Hy@DisableOption{pdfcreator}%
10499 \Hy@DisableOption{pdfcreationdate}%
10500 \Hy@DisableOption{pdfmoddate}%
10501 \Hy@DisableOption{pdfproducer}%
10502 \Hy@DisableOption{pdfkeywords}%
10503 \Hy@DisableOption{pdftrapped}%
10504 \Hy@DisableOption{pdfinfo}%
10505 }
10506 \def\PDF@SetupDoc{%
10507 \ifx\@baseurl\@empty
10508 \else
10509 \special{PDF: Base \@baseurl}%
10510 \fi
10511 \ifx\@pdfpagescrop\@empty\else
10512 \special{PDF: BBox \@pdfpagescrop}%
10513 \fi
10514 \def\Hy@temp{}%
10515 \ifx\@pdfstartpage\@empty
10516 \else
10517 \ifx\@pdfstartview\@empty
10518 \else
10519 \edef\Hy@temp{%
10520 ,Page=\@pdfstartpage
10521 ,View=\@pdfstartview
10522 }%
10523 \fi
10524 \fi
10525 \edef\Hy@temp{%

```



```

10526 \noexpand\pdfmark{%
10527 pdfmark=/DOCVIEW,%
10528 PageMode=/\@pdfpagemode
10529 \Hy@temp
10530 }%
10531 }%
10532 \Hy@temp
10533 \ifx\@pdfpagescrop\@empty
10534 \else
10535 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10536 \fi
10537 \edef\Hy@temp{%
10538 \ifHy@pdftoolbar\else /HideToolbar true\fi
10539 \ifHy@pdfmenubar\else /HideMenubar true\fi
10540 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10541 \ifHy@pdffitwindow /FitWindow true\fi
10542 \ifHy@pdfcenterwindow /CenterWindow true\fi
10543 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10544 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10545 \Hy@UseNameKey{Direction}\@pdfdirection
10546 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10547 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10548 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10549 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10550 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10551 \Hy@UseNameKey{Duplex}\@pdfduplex
10552 \ifx\@pdfpicktraybypdfsize\@empty
10553 \else
10554 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10555 \fi
10556 \ifx\@pdfprintpagerange\@empty
10557 \else
10558 /PrintPageRange[\@pdfprintpagerange]%
10559 \fi
10560 \ifx\@pdfnumcopies\@empty
10561 \else
10562 /NumCopies \@pdfnumcopies
10563 \fi
10564 }%
10565 \pdfmark{pdfmark=/PUT,%
10566 Raw={%
10567 \string{Catalog\string}<<%
10568 \ifx\Hy@temp\@empty
10569 \else
10570 /ViewerPreferences<<\Hy@temp>>%
10571 \fi
10572 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10573 \ifx\@pdflang\relax
10574 \else
10575 /Lang(\@pdflang)%
10576 \fi
10577 >>%
10578 }%
10579 }%
10580 }
10581 </dviwindo>
10582 <*\dvi pdfm | xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```
10583 \providecommand*\XR@ext}{pdf}
10584 \Hy@setbreaklinks{true}
10585 \def\HyPat@ObjRef{%
10586   @[\ ]+}%
10587 }
10588 \newsavebox{\pdfm@box}
10589 \def\@pdfm@mark#1{\special{pdf:#1}}
10590 \Hy@WrapperDef\@pdfm@dest#1{%
10591   \Hy@SaveLastskip
10592   \Hy@VerboseAnchor{#1}%
10593   \begingroup
10594     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10595     \def\x{XYZ}%
10596     \ifx\x\@pdfview
10597       \def\x{XYZ @xpos @ypos null}%
10598     \else
10599       \def\x{FitH}%
10600       \ifx\x\@pdfview
10601         \def\x{FitH @ypos}%
10602       \else
10603         \def\x{FitBH}%
10604         \ifx\x\@pdfview
10605           \def\x{FitBH @ypos}%
10606         \else
10607           \def\x{FitV}%
10608           \ifx\x\@pdfview
10609             \def\x{FitV @xpos}%
10610           \else
10611             \def\x{FitBV}%
10612             \ifx\x\@pdfview
10613               \def\x{FitBV @xpos}%
10614             \else
10615               \def\x{Fit}%
10616               \ifx\x\@pdfview
10617                 \let\x\@pdfview
10618               \else
10619                 \def\x{FitB}%
10620                 \ifx\x\@pdfview
10621                   \let\x\@pdfview
10622                 \else
10623                   \def\x{FitR}%
10624                   \ifx\x\@pdfview
10625                     \Hy@Warning{'pdfview=FitR' is not supported}%
10626                     \def\x{XYZ @xpos @ypos null}%
10627                   \else
10628                     \@onelevel@sanitize\@pdfview
10629                     \Hy@Warning{%
10630                       Unknown value '\@pdfview' for pdfview%
10631                     }%
10632                     \def\x{XYZ @xpos @ypos null}%
10633                   \fi
10634                 \fi
10635               \fi
10636             \fi
```

```

10637     \fi
10638     \fi
10639     \fi
10640     \fi
10641     \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10642 \endgroup
10643 \Hy@RestoreLastskip
10644 }
10645 \providecommand*\@pdfview{XYZ}
10646 \providecommand*\@pdfborder{0 0 1}
10647 \providecommand*\@pdfborderstyle{}
10648 \def\hyper@anchor#1{%
10649   \@pdfm@dest{#1}%
10650 }
10651 \def\hyper@anchorstart#1{%
10652   \Hy@activeanchortrue
10653   \@pdfm@dest{#1}%
10654 }
10655 \def\hyper@anchorend{%
10656   \Hy@activeanchorfalse
10657 }
10658 \newcounter{Hy@AnnotLevel}
10659 \ifHy@ocgcolorlinks
10660   \def\OBJ@OCG@view{@OCG@view}%
10661   \@pdfm@mark{%
10662     obj \OBJ@OCG@view <<%
10663     /Type/OCG%
10664     /Name(View)%
10665     /Usage<<%
10666     /Print<<%
10667     /PrintState/OFF%
10668     >>%
10669     /View<<%
10670     /ViewState/ON%
10671     >>%
10672     >>%
10673     >>%
10674   }%
10675   \@pdfm@mark{close \OBJ@OCG@view}%
10676   \def\OBJ@OCG@print{@OCG@print}%
10677   \@pdfm@mark{%
10678     obj \OBJ@OCG@print <<%
10679     /Type/OCG%
10680     /Name(Print)%
10681     /Usage<<%
10682     /Print<<%
10683     /PrintState/ON%
10684     >>%
10685     /View<<%
10686     /ViewState/OFF%
10687     >>%
10688     >>%
10689     >>%
10690   }%
10691   \@pdfm@mark{close \OBJ@OCG@print}%
10692   \def\OBJ@OCGs{@OCGs}%
10693   \@pdfm@mark{%

```

```

10694   obj \OBJ@OCGs [%
10695       \OBJ@OCG@view\space\OBJ@OCG@print
10696   ]%
10697 }%
10698 \@pdfm@mark{close \OBJ@OCGs}%
10699 \@pdfm@mark{%
10700   put @catalog <<%
10701     /OCProperties<<%
10702     /OCGs \OBJ@OCGs
10703     /D<<%
10704     /OFF[\OBJ@OCG@print]%
10705     /AS[%
10706       <<%
10707         /Event/View%
10708         /OCGs \OBJ@OCGs
10709         /Category[/View]%
10710       >>%
10711       <<%
10712         /Event/Print%
10713         /OCGs \OBJ@OCGs
10714         /Category[/Print]%
10715       >>%
10716       <<%
10717         /Event/Export%
10718         /OCGs \OBJ@OCGs
10719         /Category[/Print]%
10720       >>%
10721     ]%
10722   >>%
10723 >>%
10724 >>%
10725 }%
10726 \AtBeginShipout{%
10727   \setbox\AtBeginShipoutBox=\hbox{%
10728     \copy\AtBeginShipoutBox
10729     \@pdfm@mark{%
10730       put @resources <<%
10731         /Properties<<%
10732         /OCView \OBJ@OCG@view
10733         /OCPrint \OBJ@OCG@print
10734       >>%
10735     >>%
10736   }%
10737 }%
10738 }%
10739 \Hy@AtBeginDocument{%
10740   \def\Hy@colorlink#1{%
10741     \begingroup
10742     \ifHy@ocgcolorlinks
10743       \def\Hy@ocgcolor{#1}%
10744       \setbox0=\hbox\bgroup\color@begingroup
10745     \else
10746       \HyColor@UseColor#1%
10747     \fi
10748   }%
10749   \def\Hy@endcolorlink{%
10750     \ifHy@ocgcolorlinks

```

```

10751 \color@endgroup\egroup
10752 \mbox{%
10753 \@pdfm@mark{content /OC/OCPrint BDC}%
10754 \rlap{\copy0}%
10755 \@pdfm@mark{content EMC/OC/OCView BDC}%
10756 \begingroup
10757 \expandafter\HyColor@UseColor\Hy@ocgcolor
10758 \box0 %
10759 \endgroup
10760 \@pdfm@mark{content EMC}%
10761 }%
10762 \fi
10763 \endgroup
10764 }%
10765 }%
10766 \else
10767 \Hy@DisableOption{ocgcolorlinks}%
10768 \fi

```

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

```

10769 \def\Hy@BeginAnnot#1{%
10770 \global\advance\c@Hy@AnnotLevel\@ne
10771 \ifnum\c@Hy@AnnotLevel=\@ne
10772 #1%
10773 \fi
10774 }
10775 \def\Hy@endAnnot{%
10776 \ifnum\value{Hy@AnnotLevel}=\@ne
10777 \Hy@endcolorlink
10778 \@pdfm@mark{eann}%
10779 \fi
10780 \global\advance\c@Hy@AnnotLevel\m@ne
10781 }
10782 \def\Hy@undefinedname{UNDEFINED}
10783 \def\hyper@linkstart#1#2{%
10784 \Hy@VerboseLinkStart{#1}{#2}%
10785 \leavevmode
10786 \Hy@BeginAnnot{%
10787 \protected@edef\Hy@testname{#2}%
10788 \ifx\Hy@testname\@empty
10789 \Hy@Warning{%
10790 Empty destination name,\MessageBreak
10791 using ``\Hy@undefinedname'%
10792 }%
10793 \let\Hy@testname\Hy@undefinedname
10794 \else
10795 \Hy@pstringdef\Hy@testname{%
10796 \expandafter\HyperDestNameFilter\expandafter{%
10797 \Hy@testname
10798 }%
10799 }%
10800 \fi
10801 \@pdfm@mark{%
10802 bann<<%
10803 /Type/Annot%
10804 /Subtype/Link%

```

```

10805     \ifHy@pdfa /F 4\fi
10806     \Hy@setpdfborder
10807     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10808     \else
10809     /C[\csname @#1bordercolor\endcsname]%
10810     \fi
10811     /A<<%
10812     /S/GoTo%
10813     /D(\Hy@testname)%
10814     \Hy@href@nextactionraw
10815     >>%
10816     >>%
10817     }%
10818     \expandafter\Hy@colorlink\csname @#1color\endcsname
10819     }%
10820 }
10821 \def\hyper@linkend{\Hy@EndAnnot}%
10822 \def\hyper@link#1#2#3{%
10823   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10824 }
10825 \def\hyper@linkfile#1#2#3{%
10826   \leavevmode
10827   \Hy@BeginAnnot{%
10828     \def\Hy@pstringF{#2}%
10829     \Hy@CleanupFile\Hy@pstringF
10830     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10831     \Hy@pstringdef\Hy@pstringD{#3}%
10832     \Hy@MakeRemoteAction
10833     \@pdfm@mark{%
10834       bann<<%
10835       /Type/Annot%
10836       /Subtype/Link%
10837       \ifHy@pdfa /F 4\fi
10838       \Hy@setpdfborder
10839       \ifx\@filebordercolor\relax
10840       \else
10841       /C[\@filebordercolor]%
10842       \fi
10843       /A<<%
10844       /S/GoToR%
10845       /F(\Hy@pstringF)%
10846       /D%
10847       \ifx\#3\%
10848       [\Hy@href@page\@pdfremotestartview]%
10849       \else
10850       (\Hy@pstringD)%
10851       \fi
10852       \Hy@SetNewWindow
10853       \Hy@href@nextactionraw
10854       >>%
10855       >>%
10856       }%
10857       \Hy@colorlink\@filecolor
10858     }%
10859     #1\Hy@xspace@end
10860     \Hy@EndAnnot
10861   }

```

```

10862 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
10863 \leavevmode
10864 \Hy@BeginAnnot{%
10865 \Hy@pstringdef\Hy@pstringF{#1}%
10866 \Hy@pstringdef\Hy@pstringP{#3}%
10867 \@pdfm@mark{%
10868 bann<<%
10869 /Type/Annot%
10870 /Subtype/Link%
10871 \ifHy@pdfa /F 4\fi
10872 \Hy@setpdfborder
10873 \ifx\@runbordercolor\relax
10874 \else
10875 /C[\@runbordercolor]%
10876 \fi
10877 /A<<%
10878 /F(\Hy@pstringF)%
10879 /S/Launch%
10880 \Hy@SetNewWindow
10881 \ifx\|#3\|
10882 \else
10883 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10884 \fi
10885 \Hy@href@nextactionraw
10886 >>%
10887 >>%
10888 }%
10889 \Hy@colorlink\@runcolor
10890 }%
10891 #2\Hy@xspace@end
10892 \Hy@endAnnot
10893 }
10894 \def\hyper@linkurl#1#2{%
10895 \leavevmode
10896 \Hy@BeginAnnot{%
10897 \Hy@pstringdef\Hy@pstringURI{#2}%
10898 \@pdfm@mark{%
10899 bann<<%
10900 /Type/Annot%
10901 /Subtype/Link%
10902 \ifHy@pdfa /F 4\fi
10903 \Hy@setpdfborder
10904 \ifx\@urlbordercolor\relax
10905 \else
10906 /C[\@urlbordercolor]%
10907 \fi
10908 /A<<%
10909 /S/URI%
10910 /URI(\Hy@pstringURI)%
10911 \ifHy@href@ismap
10912 /IsMap true%
10913 \fi
10914 \Hy@href@nextactionraw
10915 >>%
10916 >>%
10917 }%
10918 \Hy@colorlink\@urlcolor

```

```

10919 }%
10920 #1\Hy@xspace@end
10921 \Hy@EndAnnot
10922 }
10923 \def\Acrobatmenu#1#2{%
10924 \Hy@Acrobatmenu{#1}{#2}{%
10925 \Hy@BeginAnnot{%
10926 \EdefEscapeName\Hy@temp@menu{#1}%
10927 \@pdfm@mark{%
10928 bann<<%
10929 /Type/Annot%
10930 /Subtype/Link%
10931 \ifHy@pdfa /F 4\fi
10932 \Hy@setpdfborder
10933 \ifx\@menubordercolor\relax
10934 \else
10935 /C[\@menubordercolor]%
10936 \fi
10937 /A<<%
10938 /S/Named%
10939 /N/\Hy@temp@menu
10940 \Hy@href@nextactionraw
10941 >>%
10942 >>%
10943 }%
10944 \Hy@colorlink\@menucolor
10945 }%
10946 #2\Hy@xspace@end
10947 \Hy@EndAnnot
10948 }%
10949 }
10950 \ifx\@pdfproducer\relax
10951 \def\@pdfproducer{dvipdfm}%

```

Detect Xe_{TeX}. However, but xdvipdfmx will overwrite it in the final PDF file.

```

10952 \begingroup\expandafter\expandafter\expandafter\endgroup
10953 \expandafter\ifx\csname XeTeXversion\endcsname\relax
10954 \else
10955 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10956 \fi
10957 \fi
10958 \def\PDF@FinishDoc{%
10959 \Hy@UseMaketitleInfos
10960 \HyInfo@GenerateAddons
10961 \@pdfm@mark{%
10962 docinfo<<%
10963 /Title(\@pdftitle)%
10964 /Subject(\@pdfsubject)%
10965 /Creator(\@pdfcreator)%
10966 \ifx\@pdfcreationdate\empty
10967 \else
10968 /CreationDate(\@pdfcreationdate)%
10969 \fi
10970 \ifx\@pdfmoddate\empty
10971 \else
10972 /ModDate(\@pdfmoddate)%
10973 \fi
10974 /Author(\@pdfauthor)%

```



```

10975 \ifx\@pdfproducer\relax
10976 \else
10977 /Producer(\@pdfproducer)%
10978 \fi
10979 /Keywords(\@pdfkeywords)%
10980 \ifx\@pdftrapped\@empty
10981 \else
10982 /Trapped/\@pdftrapped
10983 \fi
10984 \HyInfo@Addons
10985 >>%
10986 }%
10987 \Hy@DisableOption{pdfauthor}%
10988 \Hy@DisableOption{pdftitle}%
10989 \Hy@DisableOption{pdfsubject}%
10990 \Hy@DisableOption{pdfcreator}%
10991 \Hy@DisableOption{pdfcreationdate}%
10992 \Hy@DisableOption{pdfmoddate}%
10993 \Hy@DisableOption{pdfproducer}%
10994 \Hy@DisableOption{pdfkeywords}%
10995 \Hy@DisableOption{pdftrapped}%
10996 \Hy@DisableOption{pdfinfo}%
10997 }

10998 \def\PDF@SetupDoc{%
10999 \edef\Hy@temp{%
11000 \ifHy@pdftoolbar\else /HideToolbar true\fi
11001 \ifHy@pdfmenubar\else /HideMenubar true\fi
11002 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11003 \ifHy@pdfwindow /FitWindow true\fi
11004 \ifHy@pdfcenterwindow /CenterWindow true\fi
11005 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11006 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11007 \Hy@UseNameKey{Direction}\@pdfdirection
11008 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11009 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11010 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11011 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11012 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11013 \Hy@UseNameKey{Duplex}\@pdfduplex
11014 \ifx\@pdfpicktraybypdfsize\@empty
11015 \else
11016 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11017 \fi
11018 \ifx\@pdfprintpagerange\@empty
11019 \else
11020 /PrintPageRange[\@pdfprintpagerange]%
11021 \fi
11022 \ifx\@pdfnumcopies\@empty
11023 \else
11024 /NumCopies \@pdfnumcopies
11025 \fi
11026 }%
11027 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11028 \@pdfm@mark{%
11029 docview<<%
11030 \ifx\@pdfstartpage\@empty
11031 \else

```

```

11032 \ifx\@pdfstartview\@empty
11033 \else
11034 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
11035 \fi
11036 \fi
11037 \ifx\@baseurl\@empty
11038 \else
11039 /URI<</Base(\Hy@pstringB)>>%
11040 \fi
11041 /PageMode/\@pdfpagemode
11042 \ifx\Hy@temp\@empty
11043 \else
11044 /ViewerPreferences<<\Hy@temp>>%
11045 \fi
11046 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11047 \ifx\@pdflang\relax
11048 \else
11049 /Lang(\@pdflang)%
11050 \fi
11051 >>%
11052 }%
11053 \ifx\@pdfpagescrop\@empty
11054 \else
11055 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
11056 \fi
11057 }
11058 </dvipdfm | xetex>
11059 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

11060 \def\hyper@pagetransition{%
11061 \ifx\@pdfpagetransition\relax
11062 \else
11063 \ifx\@pdfpagetransition\@empty
11064 \else
11065 \special{pdf:put @thispage %
11066 <</Trans<</S/\@pdfpagetransition>>>>%
11067 }%
11068 \fi
11069 \fi
11070 }

```

\hyper@pageduration

```

11071 \def\hyper@pageduration{%
11072 \ifx\@pdfpageduration\relax
11073 \else
11074 \ifx\@pdfpageduration\@empty
11075 \else
11076 \special{pdf:put @thispage %
11077 <</Dur \@pdfpageduration>>%
11078 }%
11079 \fi
11080 \fi
11081 }

```

\hyper@pagehidden

```

11082 \def\hyper@pagehidden{%

```

```

11083 \ifHy@useHidKey
11084   \special{pdf:put @thispage %
11085     <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11086   }%
11087 \fi
11088 }

11089 \g@addto@macro\Hy@EveryPageBoxHook{%
11090   \hyper@pagetransition
11091   \hyper@pageduration
11092   \hyper@pagehidden
11093 }

11094 </dvipdfm | xetex>

```

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

```

11095 <*dvipdfm>
11096 \AtBeginShipoutFirst{%
11097   \ifHy@setpagesize
11098     \begingroup
11099     \@ifundefined{stockwidth}{%
11100       \ifdim\paperwidth>\z@
11101       \ifdim\paperheight>\z@
11102         \special{papersize=\the\paperwidth,\the\paperheight}%
11103       \fi
11104     \fi
11105   }{%
11106     \ifdim\stockwidth>\z@
11107     \ifdim\stockheight>\z@
11108       \special{papersize=\the\stockwidth,\the\stockheight}%
11109     \fi
11110   \fi
11111 }%
11112 \endgroup
11113 \fi
11114 \Hy@DisableOption{setpagesize}%
11115 }
11116 </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.

```

11117 <*vtexhtml>
11118 \providecommand*\XR@ext}{htm}
11119 \RequirePackage{vtexhtml}
11120 \newif\if@Localurl
11121 \let\PDF@FinishDoc\ltx@empty
11122 \def\PDF@SetupDoc{%
11123   \ifx\@baseurl\@empty
11124     \else
11125     \special{!direct <base href="\@baseurl">}%
11126   \fi
11127 }
11128 \def\@urltype{url}
11129 \def\hyper@link#1#2#3{%
11130   \Hy@VerboseLinkStart{#1}{#2}%

```

```

11131 \leavevmode
11132 \special{!direct <a href=%
11133   \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11134 #3\Hy@xspace@end
11135 \special{!direct </a>}%
11136 }
11137 \def\hyper@linkurl#1#2{%
11138   \begingroup
11139     \hyper@chars
11140     \leavevmode
11141     \MathBSuppress=1\relax
11142     \special{!direct <a href=%
11143       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
11144     #1\Hy@xspace@end
11145     \MathBSuppress=0\relax
11146     \special{!direct </a>}%
11147   \endgroup
11148 }
11149 \def\hyper@linkfile#1#2#3{%
11150   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11151 }
11152 \def\hyper@linkstart#1#2{%
11153   \Hy@VerboseLinkStart{#1}{#2}%
11154   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
11155     \@Localurltrue
11156     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
11157   \else
11158     \@Localurlfalse
11159     \begingroup
11160       \hyper@chars
11161       \special{!aref \HyperDestNameFilter{#2}}%
11162     \endgroup
11163   \fi
11164 }
11165 \def\hyper@linkend{%
11166   \if@Localurl
11167     \special{!endaref}%
11168   \else
11169     \special{!direct </a>}%
11170   \fi
11171 }
11172 \Hy@WrapperDef\hyper@anchorstart#1{%
11173   \Hy@SaveLastskip
11174   \Hy@VerboseAnchor{#1}%
11175   \begingroup
11176     \hyper@chars
11177     \special{!aname #1}%
11178     \special{!direct <a name=%
11179       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11180   \endgroup
11181   \Hy@activeanchortrue
11182 }
11183 \def\hyper@anchorend{%
11184   \special{!direct </a>}%
11185   \Hy@activeanchortrue
11186   \Hy@RestoreLastskip
11187 }

```

```

11188 \Hy@WrapperDef\hyper@anchor#1{%
11189   \Hy@SaveLastskip
11190   \Hy@VerboseAnchor{#1}%
11191   \begingroup
11192     \let\protect=\string
11193     \hyper@chars
11194     \leavevmode
11195     \special{!aname #1}%
11196     \special{!direct <a name=%
11197       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11198   \endgroup
11199   \Hy@activeanchortrue
11200   \bgroup\anchor@spot\egroup
11201   \special{!direct </a>}%
11202   \Hy@activeanchorfalse
11203   \Hy@RestoreLastskip
11204 }
11205 \def\@Form[#1]{%
11206   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11207 }
11208 \let\@endForm\ltx@empty
11209 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11210   \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
11211 }
11212 \def\@TextField[#1]#2{% parameters, label
11213   \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11214 }
11215 \def\@CheckBox[#1]#2{% parameters, label
11216   \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11217 }
11218 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11219   \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11220 }
11221 \def\@PushButton[#1]#2{% parameters, label
11222   \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11223 }
11224 \def\@Reset[#1]#2{%
11225   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11226 }
11227 \def\@Submit[#1]#2{%
11228   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11229 }
11230 </vtexhtml>
11231 <*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.

```

11232 \ifx\mediaheight\@undefined
11233 \else
11234   \ifx\mediaheight\relax
11235     \else
11236       \ifHy@setpagesize
11237         \providecommand*{\VTeXInitMediaSize}{%
11238           \ltx@ifundefined{stockwidth}{%
11239             \ifdim\paperheight>0pt %
11240               \setlength\mediaheight\paperheight

```

```

11241      \fi
11242      \ifdim\paperheight>0pt %
11243        \setlength\mediawidth\paperwidth
11244      \fi
11245    }{%
11246      \ifdim\stockheight>0pt %
11247        \setlength\mediaheight\stockheight
11248      \fi
11249      \ifdim\stockwidth>0pt %
11250        \setlength\mediawidth\stockwidth
11251      \fi
11252    }%
11253  }%
11254  \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11255  \fi
11256  \Hy@DisableOption{setpagesize}%
11257  \fi
11258  \fi

```

Older versions of VTeX require xyz in lower case.

```

11259 \providecommand*\@pdfview{xyz}
11260 \providecommand*\@pdfborder{0 0 1}
11261 \providecommand*\@pdfborderstyle{}
11262 \let\CurrentBorderColor\@linkbordercolor
11263 \Hy@WrapperDef\hyper@anchor#1{%
11264   \Hy@SaveLastskip
11265   \Hy@VerboseAnchor{#1}%
11266   \begingroup
11267     \let\protect=\string
11268     \hyper@chars
11269     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11270   \endgroup
11271   \Hy@activeanchortrue
11272   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11273   \Hy@activeanchorfalse
11274   \Hy@RestoreLastskip
11275 }
11276 \Hy@WrapperDef\hyper@anchorstart#1{%
11277   \Hy@SaveLastskip
11278   \Hy@VerboseAnchor{#1}%
11279   \begingroup
11280     \hyper@chars
11281     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11282   \endgroup
11283   \Hy@activeanchortrue
11284 }
11285 \def\hyper@anchorend{%
11286   \Hy@activeanchorfalse
11287   \Hy@RestoreLastskip
11288 }
11289 \def\@urltype{url}
11290 \def\Hy@undefinedname{UNDEFINED}
11291 \def\hyper@linkstart#1#2{%
11292   \Hy@VerboseLinkStart{#1}{#2}%
11293   \Hy@pstringdef\Hy@pstringURI{#2}%
11294   \expandafter\Hy@colorlink\csname @#1color\endcsname
11295   \ltx@ifundefined{#@#1bordercolor}{%
11296     \let\CurrentBorderColor\relax

```

```

11297 }{%
11298   \edef\CurrentBorderColor{%
11299     \csname @#1bordercolor\endcsname
11300   }%
11301 }%
11302 \def\Hy@tempa{#1}%
11303 \ifx\Hy@tempa\@urltype
11304   \special{!%
11305     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11306       \ifHy@href@ismap
11307         /IsMap true%
11308       \fi
11309       \Hy@href@nextactionraw
11310     >,%
11311     a=<%
11312       \ifHy@pdfa /F 4\fi
11313       \Hy@setpdfborder
11314       \ifx\CurrentBorderColor\relax
11315         \else
11316           /C [\CurrentBorderColor]%
11317         \fi
11318     >%
11319   }%
11320 \else
11321   \protected@edef\Hy@testname{#2}%
11322   \ifx\Hy@testname\@empty
11323     \Hy@Warning{%
11324       Empty destination name,\MessageBreak
11325       using ``\Hy@undefinedname'%
11326     }%
11327     \let\Hy@testname\Hy@undefinedname
11328   \fi
11329   \special{!%
11330     aref \expandafter\HyperDestNameFilter
11331       \expandafter{\Hy@testname};%
11332     a=<%
11333       \ifHy@pdfa /F 4\fi
11334       \Hy@setpdfborder
11335       \ifx\CurrentBorderColor\relax
11336         \else
11337           /C [\CurrentBorderColor]%
11338         \fi
11339     >%
11340   }%
11341 \fi
11342 }
11343 \def\hyper@linkend{%
11344   \special{!endaref}%
11345   \Hy@endcolorlink
11346 }
11347 \def\hyper@linkfile#1#2#3{%
11348   \leavevmode
11349   \def\Hy@pstringF{#2}%
11350   \Hy@CleanupFile\Hy@pstringF
11351   \special{!%
11352     aref <%
11353     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi

```

```

11354 f=\Hy@pstringF>#3;%
11355 a=<%
11356 \ifHy@pdfa /F 4\fi
11357 \Hy@setpdfborder
11358 \ifx\@filebordercolor\relax
11359 \else
11360 /C [\@filebordercolor]%
11361 \fi
11362 >%
11363 }%
11364 \Hy@colorlink\@filecolor
11365 #1\Hy@xspace@end
11366 \Hy@endcolorlink
11367 \special{!endaref}%
11368 }
11369 \def\hyper@linkurl#1#2{%
11370 \begingroup
11371 \Hy@pstringdef\Hy@pstringURI{#2}%
11372 \hyper@chars
11373 \leavevmode
11374 \special{!%
11375 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11376 \ifHy@href@ismap
11377 /IsMap true%
11378 \fi
11379 \Hy@href@nextactionraw
11380 >;%
11381 a=<%
11382 \ifHy@pdfa /F 4\fi
11383 \Hy@setpdfborder
11384 \ifx\@urlbordercolor\relax
11385 \else
11386 /C [\@urlbordercolor]%
11387 \fi
11388 >%
11389 }%
11390 \Hy@colorlink\@urlcolor
11391 #1\Hy@xspace@end
11392 \Hy@endcolorlink
11393 \special{!endaref}%
11394 \endgroup
11395 }
11396 \def\hyper@link#1#2#3{%
11397 \Hy@VerboseLinkStart{#1}{#2}%
11398 \ltx@ifundefined{@#1bordercolor}{%
11399 \let\CurrentBordercolor\relax
11400 }{%
11401 \edef\CurrentBordercolor{\csname @#1bordercolor\endcsname}%
11402 }%
11403 \leavevmode
11404 \protected@edef\Hy@testname{#2}%
11405 \ifx\Hy@testname\@empty
11406 \Hy@Warning{%
11407 Empty destination name,\MessageBreak
11408 using ``\Hy@undefinedname'%
11409 }%
11410 \let\Hy@testname\Hy@undefinedname

```



```

11411 \fi
11412 \special{!%
11413   aref \expandafter\HyperDestNameFilter
11414     \expandafter{\Hy@testname};%
11415   a=<%
11416     \ifHy@pdfa /F 4\fi
11417     \Hy@setpdfborder
11418     \ifx\CurrentBorderColor\relax
11419       \else
11420         /C [\CurrentBorderColor]%
11421     \fi
11422   >%
11423 }%
11424 \expandafter
11425 \Hy@colorlink\csname @#1color\endcsname
11426   #3\Hy@xspace@end
11427 \Hy@endcolorlink
11428 \special{!endaref}%
11429 }
11430 \def\hyper@image#1#2{%
11431   \hyper@linkurl{#2}{#1}%
11432 }
11433 \def\@hyper@launch run:#1\#2#3{%
11434   \Hy@pstringdef\Hy@pstringF{#1}%
11435   \Hy@pstringdef\Hy@pstringP{#3}%
11436   \leavevmode
11437   \special{!aref %
11438     <u=%
11439       /Type/Action%
11440       /S/Launch%
11441       /F(\Hy@pstringF)%
11442       \Hy@SetNewWindow
11443       \ifx\#3\%
11444         \else
11445           /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11446         \fi
11447       \Hy@href@nextactionraw
11448     >:%
11449     a=<%
11450       \ifHy@pdfa /F 4\fi
11451       \Hy@setpdfborder
11452       \ifx\@runbordercolor\relax
11453         \else
11454           /C[\@runbordercolor]%
11455       \fi
11456     >%
11457   }%
11458   \Hy@colorlink\@runcolor
11459   #2\Hy@xspace@end
11460 \Hy@endcolorlink
11461 \special{!endaref}%
11462 }
11463 \def\Acrobatmenu#1#2{%
11464   \EdefEscapeName\Hy@temp@menu{#1}%
11465   \Hy@Acrobatmenu{#1}{#2}{%
11466     \special{!%
11467       aref <u=/S /Named /N /\Hy@temp@menu>:%

```

```

11468 a=<%
11469 \ifHy@pdfa /F 4\fi
11470 \Hy@setpdfborder
11471 \ifx\@menubordercolor\relax
11472 \else
11473 /C[\@menubordercolor]%
11474 \fi
11475 >%
11476 }%
11477 \Hy@colorlink\@menucolor
11478 #2\Hy@xspace@end
11479 \Hy@endcolorlink
11480 \special{!endaref}%
11481 }%
11482 }

```

The following code (transition effects) is made by Alex Kostin.
The code below makes sense for V_TE_X 7.02 or later.

Please never use `\@ifundefined{VTeXversion}{..}{..}` *globally*.

```

11483 \ifnum\Hy@VTeXversion<702 %
11484 \else
11485 \def\hyper@pagetransition{%
11486 \ifx\@pdfpagetransition\relax
11487 \else
11488 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

11489 \else
11490 \hvtex@parse@trans\@pdfpagetransition
11491 \fi
11492 \fi
11493 }%

```

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

Syntax of V_TE_X `\special{!trans <transition_effect>}`:

```

<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                        <Dissolve_effect> | <Glitter_effect> |
                        <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>

```

Transition codes:

```

11494 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11495 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11496 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11497 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%

```

```

11498 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}}%
11499 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}}%
11500 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}}%

```

Optional parameters:

```

11501 \def\hvtex@par@dimension{/Dm}%
11502 \def\hvtex@par@direction{/Di}%
11503 \def\hvtex@par@duration{/D}%
11504 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

11505 \def\hvtex@gettoken{%
11506   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11507 }%

```

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

```

11508 \def\hvtex@gettoken@#1 #2\@nil{%
11509   \edef\hvtex@token{#1}%
11510   \edef\hvtex@buffer{#2}%
11511 }%
11512 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

11513 \let\hvtex@trans@code\@empty
11514 \let\hvtex@param@dimension\@empty
11515 \let\hvtex@param@direction\@empty
11516 \let\hvtex@param@duration\@empty
11517 \let\hvtex@param@motion\@empty
11518 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

11519 \hvtex@gettoken
11520 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

11521   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

11522   \else
11523     \hvtex@gettoken
11524   \fi
11525 \fi
11526 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11527 \hvtex@trans@params
11528 }%

```

Reentrant macro to parse optional parameters.

```

11529 \def\hvtex@trans@params{%
11530   \ifx\hvtex@buffer\@empty
11531   \else
11532     \hvtex@gettoken
11533     \let\hvtex@trans@par\hvtex@token
11534     \ifx\hvtex@buffer\@empty
11535     \else
11536       \hvtex@gettoken
11537       \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_T_EX special takes it in milliseconds.

```

11538         \let\hvtex@param@duration\hvtex@token
11539       \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```
11540      \expandafter\edef\expandafter\hvtex@param@motion
11541      \expandafter{\expandafter\@gobble\hvtex@token}%
11542      \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
11543      \expandafter\edef\expandafter\hvtex@param@dimension
11544      \expandafter{\expandafter\@gobble\hvtex@token}%
11545      \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).

```
11546      \let\hvtex@param@direction\hvtex@token
11547      \fi\fi\fi\fi
11548      \fi
11549      \fi
11550      \ifx\hvtex@buffer\@empty
11551      \let\next\hvtex@produce@trans
11552      \else
11553      \let\next\hvtex@trans@params
11554      \fi
11555      \next
11556  }%
```

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

```
11557 \def\hvtex@produce@trans{%
11558   \let\vtex@trans@special\@empty
11559   \if S\hvtex@trans@code
11560     \edef\vtex@trans@special{\hvtex@trans@code
11561       \hvtex@param@dimension\hvtex@param@motion}%
11562   \else\if B\hvtex@trans@code
11563     \edef\vtex@trans@special{%
11564       \hvtex@trans@code\hvtex@param@dimension
11565     }%
11566   \else\if X\hvtex@trans@code
11567     \edef\vtex@trans@special{%
11568       \hvtex@trans@code\hvtex@param@motion
11569     }%
11570   \else\if W\hvtex@trans@code
11571     \edef\vtex@trans@special{%
11572       \hvtex@trans@code\hvtex@param@direction
11573     }%
11574   \else\if D\hvtex@trans@code
11575     \let\vtex@trans@special\hvtex@trans@code
11576   \else\if R\hvtex@trans@code
11577     \let\vtex@trans@special\hvtex@trans@code
11578   \else\if G\hvtex@trans@code
11579     \edef\vtex@trans@special{%
11580       \hvtex@trans@code\hvtex@param@direction
11581     }%
11582   \fi\fi\fi\fi\fi\fi
11583   \ifx\vtex@trans@special\@empty
11584   \else
11585     \ifx\hvtex@param@duration\@empty
11586     \else
11587       \setlength{\dimen@}{\hvtex@param@duration\p@}%
```

I'm not guilty of possible overflow.

```

11588 \multiply\dimen@ \@m
11589 \edef\vtex@trans@special{%
11590 \vtex@trans@special,\strip@pt\dimen@
11591 }%
11592 \fi

```

And all the mess is just for this.

```

11593 \special{!trans \vtex@trans@special}%
11594 \fi
11595 }%

11596 \def\hyper@pageduration{%
11597 \ifx\@pdfpageduration\relax
11598 \else
11599 \ifx\@pdfpageduration\@empty
11600 \special{!duration-}%
11601 \else
11602 \special{!duration \@pdfpageduration}%
11603 \fi
11604 \fi
11605 }%

11606 \def\hyper@pagehidden{%
11607 \ifHy@useHidKey
11608 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11609 \fi
11610 }%

11611 \g@addto@macro\Hy@EveryPageBoxHook{%
11612 \hyper@pagetransition
11613 \hyper@pageduration
11614 \hyper@pagehidden
11615 }%
11616 \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

```

11617 \ifx\@pdfproducer\relax
11618 \def\@pdfproducer{VTeX}%
11619 \ifnum\Hy@VTeXversion>\z@
11620 \count@\VTeXversion
11621 \divide\count@ 100 %
11622 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11623 \multiply\count@ -100 %
11624 \advance\count@\VTeXversion
11625 \edef\@pdfproducer{%
11626 \@pdfproducer
11627 .\ifnum\count@<10 0\fi\the\count@
11628 \ifx\VTeXOS\@undefined\else
11629 \ifnum\VTeXOS>0 %
11630 \ifnum\VTeXOS<6 %
11631 \space%

```

```

11632         \ifcase\VTeXOS
11633         \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11634         \fi
11635         )%
11636     \fi
11637 \fi
11638 \fi
11639 ,\space
11640 \ifnum\OpMode=\@one PDF\else PS\fi
11641 \space backend%
11642 \ifx\gexmode\@undefined\else
11643 \ifnum\gexmode>\z@\space with GeX\fi
11644 \fi
11645 }%
11646 \fi
11647 \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).

```

11648 \def\PDF@SetupDoc{%
11649 \ifx\@pdfpagescrop\@empty
11650 \else
11651 \special{!pdfinfo b=<\@pdfpagescrop>}%
11652 \fi
11653 \ifx\@pdfstartpage\@empty
11654 \else
11655 \ifx\@pdfstartview\@empty
11656 \else
11657 \special{!onopen Page\@pdfstartpage}%
11658 \fi
11659 \fi
11660 \special{!pdfinfo p=</\@pdfpagemode>}%
11661 \ifx\@baseurl\@empty
11662 \else
11663 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11664 \fi
11665 \special{!pdfinfo v=<<<%
11666 \ifHy@pdftoolbar\else /HideToolbar true\fi
11667 \ifHy@pdfmenubar\else /HideMenubar true\fi
11668 \ifHy@pdfwindowui\else /HideWindowUI true\fi
11669 \ifHy@pdffitwindow /FitWindow true\fi
11670 \ifHy@pdfcenterwindow /CenterWindow true\fi
11671 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11672 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11673 \Hy@UseNameKey{Direction}\@pdfdirection

```

```

11674 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11675 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11676 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11677 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11678 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11679 \Hy@UseNameKey{Duplex}\@pdfduplex
11680 \ifx\@pdfpicktraybypdfsize\@empty
11681 \else
11682 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11683 \fi
11684 \ifx\@pdfprintpagerange\@empty
11685 \else
11686 /PrintPageRange[\@pdfprintpagerange]%
11687 \fi
11688 \ifx\@pdfnumcopies\@empty
11689 \else
11690 /NumCopies \@pdfnumcopies
11691 \fi
11692 >>>}%
11693 \ifx\@pdfpagelayout\@empty
11694 \else
11695 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11696 \fi
11697 }%
11698 \HyInfo@AddonUnsupportedtrue
11699 \define@key{Hyp}{pdfcreationdate}{%
11700 \Hy@Warning{%
11701 VTeX does not support pdfcreationdate.\MessageBreak
11702 Therefore its setting is ignored%
11703 }%
11704 }
11705 \define@key{Hyp}{pdfmoddate}{%
11706 \Hy@Warning{%
11707 VTeX does not support pdfmoddate.\MessageBreak
11708 Therefore its setting is ignored%
11709 }%
11710 }
11711 \def\PDF@FinishDoc{%
11712 \Hy@UseMaketitleInfos
11713 \HyInfo@TrappedUnsupported
11714 \special{!pdfinfo a=<\@pdfauthor>}%
11715 \special{!pdfinfo t=<\@pdftitle>}%
11716 \special{!pdfinfo s=<\@pdfsubject>}%
11717 \special{!pdfinfo c=<\@pdfcreator>}%
11718 \ifx\@pdfproducer\relax
11719 \else
11720 \special{!pdfinfo r=<\@pdfproducer>}%
11721 \fi
11722 \special{!pdfinfo k=<\@pdfkeywords>}%
11723 \Hy@DisableOption{pdfauthor}%
11724 \Hy@DisableOption{pdftitle}%
11725 \Hy@DisableOption{pdfsubject}%
11726 \Hy@DisableOption{pdfcreator}%
11727 \Hy@DisableOption{pdfcreationdate}%
11728 \Hy@DisableOption{pdfmoddate}%
11729 \Hy@DisableOption{pdfproducer}%
11730 \Hy@DisableOption{pdfkeywords}%

```

```

11731 \Hy@DisableOption{pdftrapped}%
11732 \Hy@DisableOption{pdfinfo}%
11733 }
11734 </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.

```

11735 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11736 <package>\providecommand*{\Hy@DistillerDestFix}{%
11737 <*pdfmark | dviwindo>
11738 \def\Hy@DistillerDestFix{%
11739 \begingroup
11740 \let\x\literalps@out

```

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

```

11741 \ifnum \@ifundefined{OpMode}{0}{%
11742 \ifundefined{gexmode}{0}{%
11743 \ifnum\gexmode>0 \OpMode\else 0\fi
11744 }>1 %
11745 \def\x##1{%
11746 \immediate\special{!=##1}%
11747 }%
11748 \fi
11749 \x{%
11750 /product where{%
11751 pop %
11752 product(Distiller)search{%
11753 pop pop pop %
11754 version(.)search{%
11755 exch pop exch pop%
11756 (3011)eq{%
11757 gsave %
11758 newpath 0 0 moveto closepath clip%
11759 /Courier findfont 10 scalefont setfont %
11760 72 72 moveto(.)show %
11761 grestore%
11762 }if%
11763 }{pop}ifelse%
11764 }{pop}ifelse%
11765 }if%
11766 }%
11767 \endgroup
11768 }
11769 </pdfmark | dviwindo>

```


47.8 Direct pdfmark support

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

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

and the correct definitions of the following PostScript procedures:

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

```
11770 (*pdfmark)
11771 \Hy@breaklinks@unsupported
11772 \def\HyPat@ObjRef{%
11773   \[~{}]+\}%
11774 }
11775 \Hy@WrapperDef\hyper@anchor#1{%
11776   \Hy@SaveLastskip
11777   \Hy@VerboseAnchor{#1}%
11778   \begingroup
11779     \pdfmark[\anchor@spot]{%
11780       pdfmark=/DEST,%
11781       linktype=anchor,%
11782       View=/\@pdfview \@pdfviewparams,%
11783       DestAnchor={#1}%
11784     }%
11785   \endgroup
11786   \Hy@RestoreLastskip
11787 }
11788 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
11789 \Hy@WrapperDef\hyper@anchorstart#1{%
11790   \Hy@SaveLastskip
11791   \Hy@VerboseAnchor{#1}%
11792   \literalps@out{H.S}%
11793   \Hy@AllowHyphens
11794   \xdef\hyper@currentanchor{#1}%
11795   \Hy@activeanchortrue
11796 }
11797 \def\hyper@anchorend{%
11798   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11799   \pdfmark{%
11800     pdfmark=/DEST,%
11801     linktype=anchor,%
11802     View=/\@pdfview \@pdfviewparams,%
11803     DestAnchor=\hyper@currentanchor,%
11804   }%
11805   \Hy@activeanchorfalse
11806   \Hy@RestoreLastskip
11807 }
11808 \def\hyper@linkstart#1#2{%
11809   \Hy@VerboseLinkStart{#1}{#2}%
11810   \ifHy@breaklinks
11811     \else
11812     \leavevmode
```

```

11813 \ifmmode
11814   \def\Hy@LinkMath{$}%
11815 \else
11816   \let\Hy@LinkMath\ltx@empty
11817 \fi
11818 \Hy@SaveSpaceFactor
11819 \hbox\bgroup
11820 \Hy@RestoreSpaceFactor
11821 \Hy@LinkMath
11822 \fi
11823 \expandafter\Hy@colorlink\csname @#1color\endcsname
11824 \literalps@out{H.S}%
11825 \Hy@AllowHyphens
11826 \xdef\hyper@currentanchor{#2}%
11827 \gdef\hyper@currentlinktype{#1}%
11828 }
11829 \def\hyper@linkend{%
11830   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11831   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11832     \let\Hy@tempcolor\relax
11833   }{%
11834     \edef\Hy@tempcolor{%
11835       \csname @\hyper@currentlinktype bordercolor\endcsname
11836     }%
11837   }%
11838   \pdfmark{%
11839     pdfmark=/ANN,%
11840     linktype=link,%
11841     Subtype=/Link,%
11842     PDFAFlags=4,%
11843     Dest=\hyper@currentanchor,%
11844     AcroHighlight=\@pdfhighlight,%
11845     Border=\@pdfborder,%
11846     BorderStyle=\@pdfborderstyle,%
11847     Color=\Hy@tempcolor,%
11848     Raw=H.B%
11849   }%
11850   \Hy@endcolorlink
11851   \ifHy@breaklinks
11852   \else
11853     \Hy@LinkMath
11854     \Hy@SaveSpaceFactor
11855     \egroup
11856     \Hy@RestoreSpaceFactor
11857   \fi
11858 }

```

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.

```

11859 \begingroup
11860 \catcode`P=12 %
11861 \catcode`T=12 %
11862 \lowercase{\endgroup
11863 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11864 }
11865 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```
11866 \def\hyper@pagetransition{%
11867   \ifx\@pdfpagetransition\relax
11868   \else
11869     \ifx\@pdfpagetransition\@empty
11870       % 1. Does an old entry have to be deleted?
11871       % 2. If 1=yes, how to delete?
11872     \else
11873       \pdfmark{%
11874         pdfmark=/PUT,%
11875         Raw={%
11876           \string{ThisPage\string}%
11877           <</Trans << /S /\@pdfpagetransition\space >> >>%
11878         }%
11879       }%
11880     \fi
11881   \fi
11882 }
```

\hyper@pageduration

```
11883 \def\hyper@pageduration{%
11884   \ifx\@pdfpageduration\relax
11885   \else
11886     \ifx\@pdfpageduration\@empty
11887       % 1. Does an old entry have to be deleted?
11888       % 2. If 1=yes, how to delete?
11889     \else
11890       \pdfmark{%
11891         pdfmark=/PUT,%
11892         Raw={%
11893           \string{ThisPage\string}%
11894           <</Dur \@pdfpageduration>>%
11895         }%
11896       }%
11897     \fi
11898   \fi
11899 }
```

\hyper@pagehidden

```
11900 \def\hyper@pagehidden{%
11901   \ifHy@useHidKey
11902     \pdfmark{%
11903       pdfmark=/PUT,%
11904       Raw={%
11905         \string{ThisPage\string}%
11906         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11907       }%
11908     }%
11909   \fi
11910 }

11911 \g@addto@macro\Hy@EveryPageBoxHook{%
11912   \hyper@pagetransition
11913   \hyper@pageduration
11914   \hyper@pagehidden
11915 }

11916 \def\hyper@image#1#2{%
```

```

11917 \hyper@linkurl{#2}{#1}%
11918 }
11919 \def\Hy@undefinedname{UNDEFINED}
11920 \def\hyper@link#1#2#3{%
11921 \Hy@VerboseLinkStart{#1}{#2}%
11922 \ltx@ifundefined{#1bordercolor}{%
11923 \let\Hy@tempcolor\relax
11924 }{%
11925 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11926 }%
11927 \begingroup
11928 \protected@edef\Hy@testname{#2}%
11929 \ifx\Hy@testname\@empty
11930 \Hy@Warning{%
11931 Empty destination name,\MessageBreak
11932 using '\Hy@undefinedname'%
11933 }%
11934 \let\Hy@testname\Hy@undefinedname
11935 \fi
11936 \pdfmark[{#3}]{%
11937 Color=\Hy@tempcolor,%
11938 linktype={#1},%
11939 AcroHighlight=\@pdfhighlight,%
11940 Border=\@pdfborder,%
11941 BorderStyle=\@pdfborderstyle,%
11942 pdfmark=/ANN,%
11943 Subtype=/Link,%
11944 PDFAMark=4,%
11945 Dest=\Hy@testname
11946 }%
11947 \endgroup
11948 }
11949 \newtoks\pdf@docset
11950 \def\PDF@FinishDoc{%
11951 \Hy@UseMaketitleInfos
11952 \Hy@Info@GenerateAddons
11953 \let\Hy@temp\@empty
11954 \ifx\@pdfcreationdate\@empty
11955 \else
11956 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11957 \fi
11958 \ifx\@pdfmoddate\@empty
11959 \else
11960 \expandafter\def\expandafter\Hy@temp\expandafter{%
11961 \Hy@temp
11962 ModDate=\@pdfmoddate,%
11963 }%
11964 \fi
11965 \ifx\@pdfproducer\relax
11966 \else
11967 \expandafter\def\expandafter\Hy@temp\expandafter{%
11968 \Hy@temp
11969 Producer=\@pdfproducer,%
11970 }%
11971 \fi
11972 \expandafter
11973 \pdfmark\expandafter{%

```

```

11974 \Hy@temp
11975 pdfmark=/DOCINFO,%
11976 Title=\@pdftitle,%
11977 Subject=\@pdfsubject,%
11978 Creator=\@pdfcreator,%
11979 Author=\@pdfauthor,%
11980 Keywords=\@pdfkeywords,%
11981 Trapped=\@pdftrapped
11982 }%
11983 \ifx\HyInfo@Addons\@empty
11984 \else
11985 \pdfmark{%
11986 pdfmark=/DOCINFO,%
11987 Raw={\HyInfo@Addons}%
11988 }%
11989 \fi
11990 \Hy@DisableOption{pdfauthor}%
11991 \Hy@DisableOption{pdftitle}%
11992 \Hy@DisableOption{pdfsubject}%
11993 \Hy@DisableOption{pdfcreator}%
11994 \Hy@DisableOption{pdfcreationdate}%
11995 \Hy@DisableOption{pdfmoddate}%
11996 \Hy@DisableOption{pdfproducer}%
11997 \Hy@DisableOption{pdfkeywords}%
11998 \Hy@DisableOption{pdftrapped}%
11999 \Hy@DisableOption{pdfinfo}%
12000 }
12001 \def\PDF@SetupDoc{%
12002 \def\Hy@temp{}%
12003 \ifx\@pdfstartpage\@empty
12004 \else
12005 \ifx\@pdfstartview\@empty
12006 \else
12007 \edef\Hy@temp{%
12008 ,Page=\@pdfstartpage
12009 ,View=\@pdfstartview
12010 }%
12011 \fi
12012 \fi
12013 \edef\Hy@temp{%
12014 \noexpand\pdfmark{%
12015 pdfmark=/DOCVIEW,%
12016 PageMode=/\@pdfpagemode
12017 \Hy@temp
12018 }%
12019 }%
12020 \Hy@temp
12021 \ifx\@pdfpagescrop\@empty
12022 \else
12023 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12024 \fi
12025 \edef\Hy@temp{%
12026 \ifHy@pdftoolbar\else /HideToolbar true\fi
12027 \ifHy@pdfmenubar\else /HideMenubar true\fi
12028 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12029 \ifHy@pdfwindow /FitWindow true\fi
12030 \ifHy@pdfcenterwindow /CenterWindow true\fi

```

```

12031 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12032 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12033 \Hy@UseNameKey{Direction}\@pdfdirection
12034 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12035 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12036 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12037 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12038 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12039 \Hy@UseNameKey{Duplex}\@pdfduplex
12040 \ifx\@pdfpicktraybypdfsize\@empty
12041 \else
12042 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12043 \fi
12044 \ifx\@pdfprintpagerange\@empty
12045 \else
12046 /PrintPageRange[\@pdfprintpagerange]%
12047 \fi
12048 \ifx\@pdfnumcopies\@empty
12049 \else
12050 /NumCopies \@pdfnumcopies
12051 \fi
12052 }%
12053 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12054 \pdfmark{%
12055 pdfmark=/PUT,%
12056 Raw={%
12057 \string{Catalog\string}<<%
12058 \ifx\Hy@temp\@empty
12059 \else
12060 /ViewerPreferences<<\Hy@temp>>%
12061 \fi
12062 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12063 \ifx\@pdflang\relax
12064 \else
12065 /Lang(\@pdflang)%
12066 \fi
12067 \ifx\@baseurl\@empty
12068 \else
12069 /URI<</Base(\Hy@pstringB)>>%
12070 \fi
12071 >>%
12072 }%
12073 }%
12074 }
12075 \pdfmark>
12076 \pdfmarkbase>

```

We define a single macro, pdfmark, which uses the ‘keyval’ system to define the various allowable keys; these are *exactly* as listed in the pdfmark reference for Acrobat 3.0. The only addition is pdfmark which specifies the type of pdfmark to create (like ANN, LINK etc). The surrounding round and square brackets in the pdfmark commands are supplied, but you have to put in / characters as needed for the values.

```

12077 \newif\ifHy@pdfmarkerror
12078 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
12079 \def\pdfmark@[#1]#2{%
12080 \Hy@pdfmarkerrorfalse

```

```

12081 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12082 \@processme
12083 \let\pdf@type\relax
12084 \let\pdf@objdef\ltx@empty
12085 \kvsetkeys{PDF}{#2}%
12086 \ifHy@pdfmarkerror
12087 \else
12088   \ifx\pdf@type\relax
12089     \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12090     \ifx\\#1\\%
12091       \else
12092         \pdf@rect{#1}%
12093       \fi
12094     \else
12095       \ifx\\#1\\%
12096         \literalps@out{%
12097           [%
12098             \ifx\pdf@objdef\ltx@empty
12099             \else
12100               /_objdef\string{\pdf@objdef\string}%
12101             \fi
12102             \the\pdf@toks\space\pdf@type\space pdfmark%
12103           ]%
12104         \else
12105           \ltx@ifundefined{@\pdf@linktype color}{%
12106             \Hy@colorlink\@linkcolor
12107           }{%
12108             \expandafter\Hy@colorlink
12109               \csname @\pdf@linktype color\endcsname
12110           }%
12111           \pdf@rect{#1}%
12112         \literalps@out{%
12113           [%
12114             \ifx\pdf@objdef\ltx@empty
12115             \else
12116               /_objdef\string{\pdf@objdef\string}%
12117             \fi
12118             \the\pdf@toks\space\pdf@type\space pdfmark%
12119           ]%
12120           \Hy@endcolorlink
12121         \fi
12122       \fi
12123     \fi
12124 }

```

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}

```

```

12125 \newsavebox{\pdf@box}
12126 \providecommand*{\Hy@setouterhbox}{\sbox}
12127 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
12128 \def\Hy@DEST{/DEST}
12129 \def\pdf@rect#1{%
12130   \begingroup
12131     \chardef\x=1 %
12132     \def\Hy@temp{#1}%
12133     \ifx\Hy@temp\ltx@empty
12134       \chardef\x=0 %
12135     \else
12136       \def\y{\anchor@spot}%
12137       \ifx\Hy@temp\y
12138         \def\y{\relax}%
12139       \ifx\anchor@spot\y
12140         \chardef\x=0 %
12141       \fi
12142     \fi
12143   \fi
12144   \expandafter\endgroup
12145   \ifcase\x
12146     \literalps@out{H.S}%
12147     \literalps@out{H.R}%
12148   \else
12149     \leavevmode
12150     \Hy@SaveSpaceFactor
12151     \ifmmode
12152       \def\Hy@LinkMath{$}%
12153     \else
12154       \let\Hy@LinkMath\ltx@empty
12155     \fi
12156     \ifHy@breaklinks
12157       \Hy@setouterhbox\pdf@box{%
12158         \Hy@RestoreSpaceFactor
12159         \Hy@LinkMath
12160         \Hy@AllowHyphens#1\Hy@xspace@end
12161         \Hy@LinkMath
12162         \Hy@SaveSpaceFactor
12163       }%
12164     \else
12165       \sbox\pdf@box{%
12166         \Hy@RestoreSpaceFactor
12167         \Hy@LinkMath
12168         #1\Hy@xspace@end
12169         \Hy@LinkMath
12170         \Hy@SaveSpaceFactor
12171       }%
12172     \fi
12173     \dimen@ht\pdf@box
12174     \ifdim\dp\pdf@box=\z@
12175       \literalps@out{H.S}%
12176     \else
12177       \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12178     \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...).

```

12179   \ifHy@breaklinks

```



```

12180 \ifhmode
12181 \Hy@breaklinksunhbox\pdf@box
12182 \else
12183 \box\pdf@box
12184 \fi
12185 \else
12186 \expandafter\box\pdf@box
12187 \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

12188 \ifdim\dimen@=\z@
12189 \literalps@out{H.R}%
12190 \else
12191 \raise\dimen@\hbox{\literalps@out{H.R}}%
12192 \fi
12193 \Hy@RestoreSpaceFactor
12194 \fi
12195 \ifx\pdf@type\Hy@DEST
12196 \else
12197 \pdf@addtoksx{H.B}%
12198 \fi
12199 }

```

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.

```

12200 \newtoks\pdf@toks
12201 \newtoks\pdf@defaulttoks
12202 \pdf@defaulttoks={}
12203 \def\pdf@addtoks#1#2{%
12204 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12205 \@processme
12206 }
12207 \def\pdf@addtoksx#1{%
12208 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12209 \@processme
12210 }
12211 \def\PDFdefaults#1{%
12212 \pdf@defaulttoks={#1}%
12213 }

```

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

```

12214 % what is the type of pdfmark?
12215 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12216 % what is the link type?
12217 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12218 \def\pdf@linktype{link}
12219 % named object?
12220 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12221 \let\pdf@objdef\ltx@empty
12222 % parameter is a stream of PDF
12223 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12224 % parameter is a name
12225 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}

```

```

12226 % parameter is a array
12227 \define@key{PDF}{Border}{%
12228   \edef\Hy@temp{#1}%
12229   \ifx\Hy@temp\@empty
12230     \else
12231       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12232     \fi
12233 }
12234 \let\Hy@BorderArrayPatch\@empty
12235 % parameter is a dictionary
12236 \define@key{PDF}{BorderStyle}{%
12237   \edef\Hy@temp{#1}%
12238   \ifx\Hy@temp\@empty
12239     \else
12240       \pdf@addtoks{<<#1>>}{BS}%
12241     \fi
12242 }
12243 % parameter is a array
12244 \define@key{PDF}{Color}{%
12245   \ifx\relax#1\relax
12246     \else
12247       \pdf@addtoks{[#1]}{Color}% hash-ok
12248     \fi
12249 }
12250 % parameter is a string
12251 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12252 % parameter is a integer
12253 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12254 % parameter is a array
12255 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12256 % parameter is a string
12257 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12258 % parameter is a string or file
12259 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12260 % parameter is a destination
12261 \define@key{PDF}{Dest}{%
12262   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12263   \ifx\Hy@pstringDest\@empty
12264     \Hy@pdfmarkerrortrue
12265     \Hy@Warning{Destination with empty name ignored}%
12266   \else
12267     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12268   \fi
12269 }
12270 \define@key{PDF}{DestAnchor}{%
12271   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12272   \ifx\Hy@pstringDest\@empty
12273     \Hy@pdfmarkerrortrue
12274     \Hy@Warning{Destination with empty name ignored}%
12275   \else
12276     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12277   \fi
12278 }
12279 % parameter is a string
12280 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12281 % parameter is a string
12282 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}

```

```

12283 % parameter is a int
12284 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12285 \define@key{PDF}{PDFAFlags}{%
12286   \ifHy@pdfa
12287     \pdf@addtoks{#1}{F}%
12288   \fi
12289 }
12290 % parameter is a name
12291 \define@key{PDF}{AcroHighlight}{%
12292   \begingroup
12293     \edef\x{#1}%
12294     \expandafter\endgroup\ifx\x\@empty
12295       \else
12296         \pdf@addtoks{#1}{H}%
12297       \fi
12298 }
12299 % parameter is a string
12300 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
12301 % parameter is a string
12302 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
12303 % parameter is a string
12304 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12305 % parameter is a string
12306 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
12307 % parameter is a Boolean
12308 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
12309 % parameter is a integer or name
12310 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
12311 % parameter is a name
12312 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
12313 % parameter is a string
12314 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
12315 % parameter is a array
12316 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
12317 % parameter is a integer
12318 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
12319 % parameter is a name
12320 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
12321 % parameter is a string
12322 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
12323 % parameter is a string
12324 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
12325 % parameter is a string
12326 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
12327 % parameter is an array
12328 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
12329 % parameter is a string
12330 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12331 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
12332 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
12333 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
12334 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
12335 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
12336 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
12337 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
12338 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}

```

```

12339 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
12340 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
12341 \define@key{PDF}{Trapped}{%
12342   \edef\Hy@temp{#1}%
12343   \ifx\Hy@temp\@empty
12344   \else
12345     \pdf@addtoks{/#1}{Trapped}%
12346   \fi
12347 }
12348
12349 \pdfmarkbase
12350 \pdfmark
12351 \def\Acrobatmenu#1#2{%
12352   \EdefEscapeName\Hy@temp@menu{#1}%
12353   \Hy@Acrobatmenu{#1}{#2}{%
12354     \pdfmark[{#2}] {%
12355       linktype=menu,%
12356       pdfmark=/ANN,%
12357       AcroHighlight=\@pdfhighlight,%
12358       Border=\@pdfborder,%
12359       BorderStyle=\@pdfborderstyle,%
12360       Color=\@menubordercolor,%
12361       Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12362       Subtype=/Link,%
12363       PDFAFlags=4%
12364     }%
12365   }%
12366 }

```

And now for some useful examples:

```

12367 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
12368 \def\PDFNextPage@[#1]#2{%
12369   \pdfmark[{#2}] {%
12370     #1,%
12371     Border=\@pdfborder,%
12372     BorderStyle=\@pdfborderstyle,%
12373     Color=.2 .1 .5,%
12374     pdfmark=/ANN,%
12375     Subtype=/Link,%
12376     PDFAFlags=4,%
12377     Page=/Next%
12378   }%
12379 }
12380 \def\PDFPreviousPage{%
12381   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12382 }
12383 \def\PDFPreviousPage@[#1]#2{%
12384   \pdfmark[{#2}] {%
12385     #1,%
12386     Border=\@pdfborder,%
12387     BorderStyle=\@pdfborderstyle,%
12388     Color=.4 .4 .1,%
12389     pdfmark=/ANN,%
12390     Subtype=/Link,%
12391     PDFAFlags=4,%
12392     Page=/Prev%
12393   }%
12394 }

```

```

12395 \def\PDFOpen#1{%
12396   \pdfmark{#1,pdfmark=/DOCVIEW}%
12397 }

```

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

```

12398 \def\hyper@linkurl#1#2{%
12399   \begingroup
12400   \Hy@pstringdef\Hy@pstringURI{#2}%
12401   \hyper@chars
12402   \leavevmode
12403   \pdfmark[{#1}]{%
12404     pdfmark=/ANN,%
12405     linktype=url,%
12406     AcroHighlight=\@pdfhighlight,%
12407     Border=\@pdfborder,%
12408     BorderStyle=\@pdfborderstyle,%
12409     Color=\@urlbordercolor,%
12410     Action={<<%
12411       /Subtype/URI%
12412       /URI(\Hy@pstringURI)%
12413       \ifHy@href@ismap
12414         /IsMap true%
12415       \fi
12416     >>},%
12417     Subtype=/Link,%
12418     PDFAFlags=4%
12419   }%
12420   \endgroup
12421 }
12422 \def\hyper@linkfile#1#2#3{%
12423   \begingroup
12424   \def\Hy@pstringF{#2}%
12425   \Hy@CleanupFile\Hy@pstringF
12426   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12427   \Hy@pstringdef\Hy@pstringD{#3}%
12428   \Hy@MakeRemoteAction
12429   \leavevmode
12430   \pdfmark[{#1}]{%
12431     pdfmark=/ANN,%
12432     Subtype=/Link,%
12433     PDFAFlags=4,%
12434     AcroHighlight=\@pdfhighlight,%
12435     Border=\@pdfborder,%
12436     BorderStyle=\@pdfborderstyle,%
12437     linktype=file,%
12438     Color=\@filebordercolor,%
12439     Action={%
12440       <<%
12441       /S/GoToR%
12442       \Hy@SetNewWindow
12443       /F(\Hy@pstringF)%
12444       /D%
12445       \ifx\#3\%
12446         [\Hy@href@page\@pdfremotestartview]%
12447       \else
12448         (\Hy@pstringD)cvn%
12449       \fi
12450       \Hy@href@nextactionraw

```

```

12451     >>%
12452   }%
12453 }%
12454 \endgroup
12455 }
12456 \def\@hyper@launch run:#1\|#2#3{%
12457   \begingroup
12458   \Hy@pstringdef\Hy@pstringF{#1}%
12459   \Hy@pstringdef\Hy@pstringP{#3}%
12460   \leavevmode
12461   \pdfmark[{#2}]{%
12462     pdfmark=/ANN,%
12463     Subtype=/Link,%
12464     PDFAFlags=4,%
12465     AcroHighlight=\@pdfhighlight,%
12466     Border=\@pdfborder,%
12467     BorderStyle=\@pdfborderstyle,%
12468     linktype=run,%
12469     Color=\@runbordercolor,%
12470     Action={%
12471       <<%
12472         /S/Launch%
12473         \Hy@SetNewWindow
12474         /F(\Hy@pstringF)%
12475         \ifx\|#3\|%
12476         \else
12477           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12478         \fi
12479         \Hy@href@nextactionraw
12480       >>%
12481     }%
12482   }%
12483 \endgroup
12484 }
12485 \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.

```

12486 \(*dvips)
12487 \providecommand*\XR@ext}{pdf}
12488 \let\Hy@raisedlink\ltx@empty
12489 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
12490 \def\headerps@out#1{\special{! #1}}%
12491 \input{pdfmark.def}%
12492 \ifx\@pdfproducer\relax
12493   \def\@pdfproducer{dvips + Distiller}%
12494 \fi
12495 \providecommand*\@pdfborder{0 0 1}
12496 \providecommand*\@pdfborderstyle{}
12497 \providecommand*\@pdfview{XYZ}

```

```

12498 \providecommand*\@pdfviewparams{ H.V}
12499 \def\Hy@BorderArrayPatch{BorderArrayPatch}

12500 \g@addto@macro\Hy@FirstPageHook{%
12501   \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.

```

12502   /DvipsToPDF{72.27 mul Resolution div} def%
12503   /PDFToDvips{72.27 div Resolution mul} def%
12504   /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.

```

12505   /BorderArrayPatch{%
12506     [exch{%
12507       dup dup type/integertype eq exch type/realtype eq or%
12508       {BPToDvips}if%
12509     }forall]%
12510   }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.

```

12511   /HyperBorder {1 PDFToDvips} def%
12512   /H.V {pdf@hoff pdf@voff null} def%
12513   /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

```

12514   /H.S {%
12515     currentpoint %
12516     HyperBorder add /pdf@lly exch def %
12517     dup DvipsToPDF 72 add /pdf@hoff exch def %
12518     HyperBorder sub /pdf@llx exch def%
12519   } def%

```

The calculation of upper left *y* is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current *y*. This is usually too much, so we remove a notional 2 points.

We have to see what the current `baselineskip` is, and convert it to the dvips coordinate system.

Argument: `baselineskip` in pt. The *x* and *y* coordinates of the current point, minus the `baselineskip`

```

12520   /H.L {%
12521     2 sub dup%
12522     /HyperBasePt exch def %
12523     PDFToDvips /HyperBaseDvips exch def %

```

```

12524     currentpoint %
12525     HyperBaseDvips sub /pdf@ury exch def%
12526     /pdf@urx exch def%
12527   } def%
12528   /H.A {%
12529     H.L %
12530 % | /pdf@voff| = the distance from the top of the page to a point
12531 % | \baselineskip| above the current point in PDF coordinates
12532     currentpoint exch pop %
12533     vsize 72 sub exch DvipsToPDF %
12534     HyperBasePt sub % baseline skip
12535     sub /pdf@voff exch def%
12536   } def%
12537   /H.R {%
12538     currentpoint %
12539     HyperBorder sub /pdf@ury exch def %
12540     HyperBorder add /pdf@urx exch def %
12541 % | /pdf@voff| = the distance from the top of the page to the current point, in
12542 % PDF coordinates
12543     currentpoint exch pop vsize 72 sub %
12544     exch DvipsToPDF sub /pdf@voff exch def%
12545   } def%
12546 }%
12547 }
12548 \AtBeginShipoutFirst{%
12549   \ifHy@setpagesize
12550     \begingroup
12551       \@ifundefined{stockwidth}{%
12552         \ifdim\paperwidth>\z@
12553           \ifdim\paperheight>\z@
12554             \special{papersize=\the\paperwidth,\the\paperheight}%
12555           \fi
12556         \fi
12557       }{%
12558         \ifdim\stockwidth>\z@
12559           \ifdim\stockheight>\z@
12560             \special{papersize=\the\stockwidth,\the\stockheight}%
12561           \fi
12562         \fi
12563       }%
12564     \endgroup
12565   \fi
12566   \Hy@DisableOption{setpagesize}%
12567 }
12568 \def\setpdfinkmargin#1{%
12569   \begingroup
12570     \setlength{\dimen@}{#1}%
12571     \literalps@out{%
12572       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12573     }%
12574   \endgroup
12575 }
12576 </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.

```

12577 (*vtxpdfmark)
12578 \providecommand*\XR@ext}{pdf}
12579 \let\Hy@raisedlink\ltx@empty
12580 \def\literalps@out#1{\special{pS:#1}}%
12581 \def\headerps@out#1{\immediate\special{pS:#1}}%
12582 \input{pdfmark.def}%
12583 \ifx\@pdfproducer\relax
12584   \ifnum\OpMode=\@ne
12585     \def\@pdfproducer{VTeX}%
12586   \else
12587     \def\@pdfproducer{VTeX + Distiller}%
12588   \fi
12589 \fi
12590 \providecommand*\@pdfborder{0 0 1}
12591 \providecommand*\@pdfborderstyle{}
12592 \providecommand*\@pdfview{XYZ}
12593 \providecommand*\@pdfviewparams{ H.V}

12594 \g@addto@macro\Hy@FirstPageHook{%
12595   \headerps@out{%
12596     /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.

```

12597   /HyperBorder {1} def%
12598   /H.V {pdf@hoff pdf@voff null} def%
12599   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: pdf@lly = $Y_c - \text{HyperBorder}$, pdf@hoff = $X_c + 72$, pdf@llx = $X_c - \text{HyperBorder}$

```

12600   /H.S {%
12601     currentpoint %
12602     HyperBorder sub%
12603     /pdf@lly exch def %
12604     dup 72 add /pdf@hoff exch def %
12605     HyperBorder sub%
12606     /pdf@llx exch def%
12607   } def%

```

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

```

12608   /H.L {%
12609     2 sub%
12610     /HyperBasePt exch def %
12611     currentpoint %
12612     HyperBasePt add HyperBorder add%
12613     /pdf@ury exch def %
12614     HyperBorder add%
12615     /pdf@urx exch def%
12616   } def%
12617   /H.A {%
12618     H.L %
12619     currentpoint exch pop %
12620     vsize 72 sub exch %

```

```

12621    HyperBasePt add add%
12622    /pdf@voff exch def%
12623    } def%
pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder
12624    /H.R {%
12625        currentpoint %
12626        HyperBorder add%
12627        /pdf@ury exch def %
12628        HyperBorder add%
12629        /pdf@urx exch def %
12630        currentpoint exch pop vsize 72 sub add%
12631        /pdf@voff exch def%
12632    } def%
12633 }%
12634 }

12635 \def\setpdfinkmargin#1{%
12636     \begingroup
12637     \setlength{\dimen@}{#1}%
12638     \literalps@out{%
12639         /HyperBorder{\strip@pt\dimen@}def%
12640     }%
12641     \endgroup
12642 }

12643 </vtxpdfmark>

```

47.11 Textures

```

12644 <*textures>
12645 \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.

```

12646 \begingroup
12647 \obeylines %
12648 \gdef\Hy@ps@CR{\noexpand
12649 }%
12650 \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`.

```

12651 \def\literalps@out#1{%
12652   \special{postscript 0 0 transform}%
12653   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12654 }%
12655 %

```

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.

```

12656 \def\headerps@out#1{%
12657   \special{%
12658     prepostscript TeXdict begin\Hy@ps@CR
12659     #1\Hy@ps@CR
12660   end%
12661 }%
12662 }%
12663 %

```

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.

```

12664 \g@addto@macro\Hy@FirstPageHook{%
12665   \headerps@out{%
12666     /betterpdfmark {%
12667       systemdict begin %
12668         dup /BP eq%
12669         {cleartomark gsave nulldevice []%
12670         {dup /EP eq%
12671           {cleartomark cleartomark grestore}%
12672           {cleartomark}%
12673         ifelse%
12674       }ifelse %
12675     end%
12676   }def\Hy@ps@CR
12677   ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12678 }% end of \headerps@out
12679 }% end of \AtBeginShipoutFirst
12680 %
12681 \input{pdfmark.def}%
12682 %
12683 \ifx\@pdfproducer\relax
12684   \def\@pdfproducer{Textures + Distiller}%
12685 \fi
12686 \providecommand*\@pdfborder{0 0 1}
12687 \providecommand*\@pdfborderstyle{}
12688 \providecommand*\@pdfview{XYZ}
12689 \providecommand*\@pdfviewparams{ H.V}
12690 %

```

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`.

```

12691 \Hy@AtBeginDocument{%
12692   \headerps@out{%

```

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

```

12693 /vsize {\Hy@pageheight} def%
12694 /DvipsToPDF {} def%
12695 /PDFToDvips {} def%
12696 /BPToDvips {} def%
12697 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12698 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12699 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12700 /H.S {%
12701     currentpoint %
12702     HyperBorder add /pdf@lly exch def %
12703     dup DvipsToPDF 72 add /pdf@hoff exch def %
12704     HyperBorder sub /pdf@llx exch def%
12705 } def\Hy@ps@CR
12706 /H.L {%
12707     2 sub %
12708     PDFToDvips /HyperBase exch def %
12709     currentpoint %
12710     HyperBase sub /pdf@ury exch def%
12711     /pdf@urx exch def%
12712 } def\Hy@ps@CR
12713 /H.A {%
12714     H.L %
12715     currentpoint exch pop %
12716     vsize 72 sub exch DvipsToPDF %
12717     HyperBase sub % baseline skip
12718     sub /pdf@voff exch def%
12719 } def\Hy@ps@CR
12720 /H.R {%
12721     currentpoint %
12722     HyperBorder sub /pdf@ury exch def %
12723     HyperBorder add /pdf@urx exch def %
12724     currentpoint exch pop vsize 72 sub %
12725     exch DvipsToPDF sub /pdf@voff exch def%
12726 } def\Hy@ps@CR
12727 }%
12728 }

12729 \def\setpdfinkmargin#1{%
12730     \begingroup
12731     \setlength{\dimen@}{#1}%
12732     \literalps@out{%
12733         /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12734     }%
12735     \endgroup
12736 }

12737 \Hy@AtBeginDocument{%
12738     \ifHy@colorlinks
12739     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12740     \fi
12741 }

```

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.

```

12742 \expandafter\let\expandafter\keepPDF@SetupDoc

```

```

12743 \csname PDF@SetupDoc\endcsname
12744 \def\PDF@SetupDoc{%
12745 \ifx\@baseurl\@empty
12746 \else
12747 \special{html:<base href="\@baseurl">}%
12748 \fi
12749 \keepPDF@SetupDoc
12750 }
12751 \Hy@WrapperDef\hyper@anchor#1{%
12752 \Hy@SaveLastskip
12753 \Hy@VerboseAnchor{#1}%
12754 \begingroup
12755 \let\protect=\string
12756 \special{html:<a name=%
12757 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12758 \endgroup
12759 \Hy@activeanchortrue
12760 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12761 \special{html:</a>}%
12762 \Hy@activeanchorfalse
12763 \Hy@RestoreLastskip
12764 }
12765 \Hy@WrapperDef\hyper@anchorstart#1{%
12766 \Hy@SaveLastskip
12767 \Hy@VerboseAnchor{#1}%
12768 \begingroup
12769 \hyper@chars
12770 \special{html:<a name=%
12771 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12772 \endgroup
12773 \Hy@activeanchortrue
12774 }
12775 \def\hyper@anchorend{%
12776 \special{html:</a>}%
12777 \Hy@activeanchorfalse
12778 \Hy@RestoreLastskip
12779 }
12780 \def\@urltype{url}
12781 \def\hyper@linkstart#1#2{%
12782 \Hy@VerboseLinkStart{#1}{#2}%
12783 \expandafter\Hy@colorlink\csname @#1color\endcsname
12784 \def\Hy@tempa{#1}%
12785 \ifx\Hy@tempa\@urltype
12786 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12787 \else
12788 \begingroup
12789 \hyper@chars
12790 \special{%
12791 html:<a href=%
12792 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
12793 }%
12794 \endgroup
12795 \fi
12796 }
12797 \def\hyper@linkend{%
12798 \special{html:</a>}%
12799 \Hy@endcolorlink

```

```

12800 }
12801 \def\hyper@linkfile#1#2#3{%
12802   \hyper@linkurl{#1}{%
12803     \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
12804   }%
12805 }
12806 \def\hyper@linkurl#1#2{%
12807   \leavevmode
12808   \ifHy@raiselinks
12809     \Hy@SaveSpaceFactor
12810     \Hy@SaveSavedSpaceFactor
12811     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12812     \Hy@RestoreSavedSpaceFactor
12813     \@linkdim\dp\@tempboxa
12814     \lower\@linkdim\hbox{%
12815       \hyper@chars
12816       \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12817   }%
12818   \Hy@colorlink\@urlcolor
12819   \Hy@RestoreSpaceFactor
12820   #1\Hy@xspace@end
12821   \Hy@SaveSpaceFactor
12822   \@linkdim\ht\@tempboxa
12823   \advance\@linkdim by -6.5\p@
12824   \raise\@linkdim\hbox{\special{html:</a>}}%
12825   \Hy@endcolorlink
12826   \Hy@RestoreSpaceFactor
12827 \else
12828   \begingroup
12829     \hyper@chars
12830     \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
12831     \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12832     \special{html:</a>}}%
12833     \Hy@endcolorlink
12834   \endgroup
12835 \fi
12836 }

```

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

```

12837 \def\hyper@link#1#2#3{%
12838   \Hy@VerboseLinkStart{#1}{#2}%
12839   \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}%
12840 }
12841 \def\hyper@image#1#2{%
12842   \begingroup
12843     \hyper@chars
12844     \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
12845   \endgroup
12846 }
12847 </textures>

```

47.12 dvipsone

```

12848 % \subsection{dvipsone driver}
12849 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12850 % |special| commands.
12851 (*dvipsone)
12852 \providecommand*\XR@ext}{pdf}

```

```

12853 \let\Hy@raisedlink\ltx@empty
12854 \providecommand*\@pdfborder{0 0 1}
12855 \providecommand*\@pdfborderstyle{}
12856 \def\literalps@out#1{\special{ps:#1}}%
12857 \def\headerps@out#1{\special{headertext=#1}}%
12858 \input{pdfmark.def}%
12859 \ifx\@pdfproducer\relax
12860   \def\@pdfproducer{dvipsone + Distiller}%
12861 \fi
12862 \HyInfo@AddonUnsupportedtrue
12863 \def\PDF@FinishDoc{%
12864   \Hy@UseMaketitleInfos
12865   \HyInfo@TrappedUnsupported
12866   \special{PDF: Keywords \@pdfkeywords}%
12867   \special{PDF: Title \@pdftitle}%
12868   \special{PDF: Creator \@pdfcreator}%
12869   \ifx\@pdfcreationdate\@empty
12870   \else
12871     \special{PDF: CreationDate \@pdfcreationdate}%
12872   \fi
12873   \ifx\@pdfmoddate\@empty
12874   \else
12875     \special{PDF: ModDate \@pdfmoddate}%
12876   \fi
12877   \special{PDF: Author \@pdfauthor}%
12878   \ifx\@pdfproducer\relax
12879   \else
12880     \special{PDF: Producer \@pdfproducer}%
12881   \fi
12882   \special{PDF: Subject \@pdfsubject}%
12883   \Hy@DisableOption{pdfauthor}%
12884   \Hy@DisableOption{pdftitle}%
12885   \Hy@DisableOption{pdfsubject}%
12886   \Hy@DisableOption{pdfcreator}%
12887   \Hy@DisableOption{pdfcreationdate}%
12888   \Hy@DisableOption{pdfmoddate}%
12889   \Hy@DisableOption{pdfproducer}%
12890   \Hy@DisableOption{pdfkeywords}%
12891   \Hy@DisableOption{pdftrapped}%
12892   \Hy@DisableOption{pdfinfo}%
12893 }
12894 \def\PDF@SetupDoc{%
12895   \def\Hy@temp{}%
12896   \ifx\@pdfstartpage\@empty
12897   \else
12898     \ifx\@pdfstartview\@empty
12899     \else
12900       \edef\Hy@temp{%
12901         ,Page=\@pdfstartpage
12902         ,View=\@pdfstartview
12903       }%
12904     \fi
12905   \fi
12906   \edef\Hy@temp{%
12907     \noexpand\pdfmark{%
12908       pdfmark=/DOCVIEW,%
12909       PageMode=/\@pdfpagemode

```

```

12910     \Hy@temp
12911   }%
12912 }%
12913 \Hy@temp
12914 \ifx\@pdfpagescrop\@empty
12915 \else
12916   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12917 \fi
12918 \edef\Hy@temp{%
12919   \ifHy@pdftoolbar\else /HideToolbar true\fi
12920   \ifHy@pdfmenubar\else /HideMenubar true\fi
12921   \ifHy@pdfwindowui\else /HideWindowUI true\fi
12922   \ifHy@pdfwindow /FitWindow true\fi
12923   \ifHy@pdfcenterwindow /CenterWindow true\fi
12924   \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12925   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12926   \Hy@UseNameKey{Direction}\@pdfdirection
12927   \Hy@UseNameKey{ViewArea}\@pdfviewarea
12928   \Hy@UseNameKey{ViewClip}\@pdfviewclip
12929   \Hy@UseNameKey{PrintArea}\@pdfprintarea
12930   \Hy@UseNameKey{PrintClip}\@pdfprintclip
12931   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12932   \Hy@UseNameKey{Duplex}\@pdfduplex
12933   \ifx\@pdfpicktraybypdfsize\@empty
12934     \else
12935     /PickTrayByPDFSize \@pdfpicktraybypdfsize
12936   \fi
12937   \ifx\@pdfprintpagerange\@empty
12938     \else
12939     /PrintPageRange[\@pdfprintpagerange]%
12940   \fi
12941   \ifx\@pdfnumcopies\@empty
12942     \else
12943     /NumCopies \@pdfnumcopies
12944   \fi
12945 }%
12946 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12947 \pdfmark{%
12948   pdfmark=/PUT,%
12949   Raw={%
12950     \string{Catalog\string}<<%
12951     \ifx\Hy@temp\@empty
12952       \else
12953       /ViewerPreferences<<\Hy@temp>>%
12954     \fi
12955     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12956     \ifx\@pdflang\relax
12957       \else
12958       /Lang(\@pdflang)%
12959     \fi
12960     \ifx\@baseurl\@empty
12961       \else
12962       /URI<</Base(\Hy@pstringB)>>%
12963     \fi
12964     >>%
12965   }%
12966 }%

```



```

12967 }
12968 \providecommand*\@pdfview{XYZ}
12969 \providecommand*\@pdfviewparams{ %
12970   gsave revscl currentpoint grestore %
12971   72 add exch pop null exch null%
12972 }
12973 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx pdf@lly pdf@urx pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to T_EX.

```

12974 \g@addto@macro\Hy@FirstPageHook{%
12975   \headerps@out{%

```

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

```

12976   /DvipsToPDF { 65781 div } def%
12977   /PDFToDvips { 65781 mul } def%
12978   /BPToDvips{65781 mul}def%
12979   /HyperBorder { 1 PDFToDvips } def%
12980   /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.

```

12981   /BorderArrayPatch{%
12982     [exch{%
12983       dup dup type/integertype eq exch type/realtype eq or%
12984       {BPToDvips}if%
12985     }forall]%
12986   }def%
12987   /H.S {%
12988     currentpoint %
12989     HyperBorder add /pdf@lly exch def %
12990     dup DvipsToPDF 72 add /pdf@hoff exch def %
12991     HyperBorder sub /pdf@llx exch def%
12992   } def%
12993   /H.L {%
12994     2 sub %
12995     PDFToDvips /HyperBase exch def %
12996     currentpoint %
12997     HyperBase sub /pdf@ury exch def%
12998     /pdf@urx exch def%
12999   } def%
13000   /H.A {%
13001     H.L %
13002     currentpoint exch pop %
13003     HyperBase sub % baseline skip
13004     DvipsToPDF /pdf@voff exch def%
13005   } def%
13006   /H.R {%
13007     currentpoint %
13008     HyperBorder sub /pdf@ury exch def %
13009     HyperBorder add /pdf@urx exch def %
13010     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
13011   } def%
13012 }%
13013 }

```

```

13014 \def\setpdfinkmargin#1{%
13015   \begingroup
13016     \setlength{\dimen@}{#1}%
13017     \literalps@out{%
13018       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13019     }%
13020   \endgroup
13021 }
13022 </dvipsone>

```

47.13 TeX4ht

```

13023 (*tex4ht)
13024 \providecommand*\XR@ext>{html}
13025 \let\Hy@raisedlink\ltx@empty
13026 \@ifpackageloaded{tex4ht}{%
13027   \Hy@InfoNoLine{tex4ht is already loaded}%
13028 }{%
13029   \RequirePackage[hTeX4ht]{tex4ht}%
13030 }
13031 \hyperlinkfileprefix{}
13032 \let\PDF@FinishDoc\ltx@empty
13033 \def\PDF@SetupDoc{%
13034   \ifx\@baseurl\@empty
13035   \else
13036     \special{t4ht=<base href="\@baseurl">}%
13037   \fi
13038 }
13039 \Hy@WrapperDef\hyper@anchor#1{%
13040   \Hy@SaveLastskip
13041   \Hy@VerboseAnchor{#1}%
13042   \begingroup
13043     \let\protect=\string
13044     \special{t4ht=<a name=%
13045       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13046   \endgroup
13047   \Hy@activeanchortrue
13048   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13049   \special{t4ht=</a>}%
13050   \Hy@activeanchorfalse
13051   \Hy@RestoreLastskip
13052 }
13053 \Hy@WrapperDef\hyper@anchorstart#1{%
13054   \Hy@SaveLastskip
13055   \Hy@VerboseAnchor{#1}%
13056   \begingroup
13057     \hyper@chars\special{t4ht=<a name=%
13058       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13059   \endgroup
13060   \Hy@activeanchortrue
13061 }
13062 \def\hyper@anchorend{%
13063   \special{t4ht=</a>}%
13064   \Hy@activeanchorfalse
13065   \Hy@RestoreLastskip
13066 }
13067 \def\@urltype{url}
13068 \def\hyper@linkstart#1#2{%

```

```

13069 \Hy@VerboseLinkStart{#1}{#2}%
13070 \expandafter\Hy@colorlink\csname @#1color\endcsname
13071 \def\Hy@tempa{#1}%
13072 \ifx\Hy@tempa\@urltype
13073   \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13074 \else
13075   \begingroup
13076     \hyper@chars
13077     \special{t4ht=<a href=%
13078       \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
13079   \endgroup
13080 \fi
13081 }
13082 \def\hyper@linkend{%
13083   \special{t4ht=</a>}%
13084   \Hy@endcolorlink
13085 }
13086 \def\hyper@linkfile#1#2#3{%
13087   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
13088 }
13089 \def\hyper@linkurl#1#2{%
13090   \leavevmode
13091   \ifHy@raiselinks
13092     \Hy@SaveSpaceFactor
13093     \Hy@SaveSavedSpaceFactor
13094     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13095     \Hy@RestoreSavedSpaceFactor
13096     \@linkdim\dp\@tempboxa
13097     \lower\@linkdim\hbox{%
13098       \begingroup
13099         \hyper@chars
13100         \special{%
13101           t4ht=<a href=\hyper@quote#2\hyper@quote>%
13102         }%
13103       \endgroup
13104     }%
13105     \Hy@colorlink\@urlcolor
13106     \Hy@RestoreSpaceFactor
13107     #1\Hy@xspace@end
13108     \Hy@SaveSpaceFactor
13109     \Hy@endcolorlink
13110     \@linkdim\ht\@tempboxa
13111     \advance\@linkdim by -6.5\p@
13112     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
13113     \Hy@RestoreSpaceFactor
13114   \else
13115     \begingroup
13116       \hyper@chars
13117       \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13118       \Hy@colorlink\@urlcolor
13119       #1\Hy@xspace@end
13120       \Hy@endcolorlink
13121       \special{t4ht=</a>}%
13122     \endgroup
13123 \fi
13124 }

```

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

```

13125 \def\hyper@link#1#2#3{%
13126   \Hy@VerboseLinkStart{#1}{#2}%
13127   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
13128 }
13129 \def\hyper@image#1#2{%
13130   \begingroup
13131     \hyper@chars
13132     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
13133   \endgroup
13134 }
13135 \let\autoref\ref
13136 \ifx \rEFLiNK \UnDef
13137   \def\rEFLiNK #1#2{#2}%
13138 \fi
13139 \let\backref\ltx@gobble

Fix for tex4ht.
13140 \AtBeginDocument{%
13141   \expandafter
13142   \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13143   \expandafter\def\csname Make:Label\endcsname#1#2{%
13144     \ifhmode
13145       \Hy@SaveSpaceFactor
13146     \else
13147       \global\Hy@SavedSpaceFactor=1000 %
13148     \fi
13149     \Hy@OrgMakeLabel{#1}{%
13150       \Hy@RestoreSpaceFactor
13151       #2\Hy@xspace@end%
13152       \Hy@SaveSpaceFactor
13153     }%
13154     \Hy@RestoreSpaceFactor
13155   }%
13156 }
13157 </tex4ht>
13158 <*tex4htcfg>
13159 \IfFileExists{\jobname.cfg}{\endinput}{}
13160 \Preamble{html}
13161   \begin{document}%
13162 \EndPreamble
13163 \def\TeX{TeX}
13164 \def\OMEGA{\Omega}
13165 \def\LaTeX{LaTeX}
13166 \def\LaTeXe{\LaTeX2e}
13167 \def\eTeX{e-TeX}
13168 \def\MF{Metafont}
13169 \def\MP{MetaPost}
13170 </tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13171 <*pdfmark>
13172 \long\def\@Form[#1]{%
13173   \g@addto@macro\Hy@FirstPageHook{%
13174     \headerps@out{%
13175 [%

```

```

13176  /_objdef{pdfDocEncoding}%
13177  /type/dict%
13178  /OBJ pdfmark%
13179  [%
13180  {pdfDocEncoding}%
13181  <<%
13182  /Type/Encoding%
13183  /Differences[%
13184    24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13185    /tilde %
13186    39/quotesingle %
13187    96/grave %
13188    128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13189    /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13190    /quotedblbase/quotedblleft/quotedblright/quoteleft%
13191    /quoteright/quotesinglbase/trademark/ffi/fll/Slash/OE/Scaron%
13192    /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13193    164/currency %
13194    166/brokenbar %
13195    168/dieresis/copyright/ordfeminine %
13196    172/logicalnot/.notdef/registered/macron/degree/plusminus%
13197    /twosuperior/threesuperior/acute/mu %
13198    183/periodcentered/cedilla/onesuperior/ordmasculine %
13199    188/onequarter/onehalf/threequarters %
13200    192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13201    /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13202    /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13203    /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13204    /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13205    /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13206    /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13207    /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13208    /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
13209    /ucircumflex/udieresis/yacute/thorn/ydieresis%
13210  ]%
13211  >>%
13212  /PUT pdfmark%
13213  [%
13214  /_objdef{ZaDb}%
13215  /type/dict%
13216  /OBJ pdfmark%
13217  [%
13218  {ZaDb}%
13219  <<%
13220  /Type/Font%
13221  /Subtype/Type1%
13222  /Name/ZaDb%
13223  /BaseFont/ZapfDingbats%
13224  >>%
13225  /PUT pdfmark%
13226  [%
13227  /_objdef{Helv}%
13228  /type/dict%
13229  /OBJ pdfmark%
13230  [%
13231  {Helv}%
13232  <<%

```

```

13233 /Type/Font%
13234 /Subtype/Type1%
13235 /Name/Helv%
13236 /BaseFont/Helvetica%
13237 /Encoding{pdfDocEncoding}%
13238 >>%
13239 /PUT pdfmark%
13240 [%
13241 /__objdef{aform}%
13242 /type/dict%
13243 /OBJ pdfmark%
13244 [%
13245 /__objdef{afields}%
13246 /type/array%
13247 /OBJ pdfmark%
13248 [%
13249 /__objdef{corder}%
13250 /type/array%
13251 /OBJ pdfmark%
13252 {%
13253 [%
13254 /BBox[0 0 100 100]%
13255 /__objdef{Check}%
13256 /BP pdfmark %
13257 1 0 0 setrgbcolor%
13258 /ZapfDingbats 80 selectfont %
13259 20 20 moveto%
13260 (4)show%
13261 [/EP pdfmark%
13262 [%
13263 /BBox[0 0 100 100]%
13264 /__objdef{Cross}%
13265 /BP pdfmark %
13266 1 0 0 setrgbcolor%
13267 /ZapfDingbats 80 selectfont %
13268 20 20 moveto%
13269 (8)show%
13270 [/EP pdfmark%
13271 [%
13272 /BBox[0 0 250 100]%
13273 /__objdef{Submit}%
13274 /BP pdfmark %
13275 0.6 setgray %
13276 0 0 250 100 rectfill %
13277 1 setgray %
13278 2 2 moveto %
13279 2 98 lineto %
13280 248 98 lineto %
13281 246 96 lineto %
13282 4 96 lineto %
13283 4 4 lineto %
13284 fill %
13285 0.34 setgray %
13286 248 98 moveto %
13287 248 2 lineto %
13288 2 2 lineto %
13289 4 4 lineto %

```

```

13290 246 4 lineto %
13291 246 96 lineto %
13292 fill%
13293 /Helvetica 76 selectfont %
13294 0 setgray %
13295 8 22.5 moveto%
13296 (Submit)show%
13297 [/EP pdfmark%
13298 [%
13299 /BBox[0 0 250 100]%
13300 /_objdef{SubmitP}%
13301 /BP pdfmark %
13302 0.6 setgray %
13303 0 0 250 100 rectfill %
13304 0.34 setgray %
13305 2 2 moveto %
13306 2 98 lineto %
13307 248 98 lineto %
13308 246 96 lineto %
13309 4 96 lineto %
13310 4 4 lineto %
13311 fill %
13312 1 setgray %
13313 248 98 moveto %
13314 248 2 lineto %
13315 2 2 lineto %
13316 4 4 lineto %
13317 246 4 lineto %
13318 246 96 lineto %
13319 fill%
13320 /Helvetica 76 selectfont %
13321 0 setgray %
13322 10 20.5 moveto%
13323 (Submit)show%
13324 [/EP pdfmark%
13325 } ?pdfmark%
13326 [%
13327 {aform}%
13328 <<%
13329 /Fields{afields}%
13330 /DR<<%
13331 /Font<<%
13332 /ZaDb{ZaDb}%
13333 /Helv{Helv}%
13334 >>%
13335 >>%
13336 /DA(/Helv 10 Tf 0 g)%
13337 /CO{corder}%
13338 \ifHy@pdfa
13339 \else
13340 \ifHyField@NeedAppearances
13341 /NeedAppearances true%
13342 \fi
13343 \fi
13344 >>%
13345 /PUT pdfmark%
13346 [%

```

```

13347 {Catalog}%
13348 <<%
13349   /AcroForm{aform}%
13350 >>%
13351 /PUT pdfmark%
13352 }}%
13353 \kvsetkeys{Form}{#1}%
13354 }
13355 \let\@endForm\ltx@empty
13356 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13357   \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13358 }

13359 \newcount\HyField@AnnotCount
13360 \HyField@AnnotCount=\z@
13361 \def\HyField@AdvanceAnnotCount{%
13362   \global\advance\HyField@AnnotCount\@ne
13363 }
13364 \def\HyField@TheAnnotCount{%
13365   \the\HyField@AnnotCount
13366 }

13367 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13368 \def\HyField@AddToFields#1{%
13369   \pdfmark{%
13370     pdfmark=/APPEND,%
13371     Raw={%
13372       \string{afields\string}%
13373       \string{#1\HyField@TheAnnotCount\string}%
13374     }%
13375   }%
13376   \ifx\Fld@calculate@code\ltx@empty
13377   \else
13378     \pdfmark{%
13379       pdfmark=/APPEND,%
13380       Raw={%
13381         \string{corder\string}%
13382         \string{#1\HyField@TheAnnotCount\string}%
13383       }%
13384     }%
13385   \fi
13386 }

13387 \def\@TextField[#1]#2{% parameters, label
13388   \def\Fld@name{#2}%
13389   \let\Fld@default\ltx@empty
13390   \let\Fld@value\@empty
13391   \def\Fld@width{\DefaultWidthofText}%
13392   \def\Fld@height{%
13393     \ifFld@multiline
13394       \DefaultHeightofTextMultiline
13395     \else
13396       \DefaultHeightofText
13397     \fi
13398   }%
13399   \begingroup
13400     \expandafter\HyField@SetKeys\expandafter{%
13401       \DefaultOptionsofText,#1%
13402     }%

```



```

13403 \HyField@FlagsText
13404 \ifFld@hidden\def\Fld@width{1sp}\fi
13405 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13406 \HyField@AdvanceAnnotCount
13407 \LayoutTextField{#2}{%
13408 \leavevmode
13409 \Hy@escapeform\PDFForm@Text
13410 \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
13411 pdfmark=/ANN,%
13412 objdef=text\HyField@TheAnnotCount,%
13413 Raw={\PDFForm@Text}%
13414 }%
13415 }%
13416 \HyField@AddToFields{text}%
13417 \endgroup
13418 }
13419 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13420 \def\Fld@name{#2}%
13421 \let\Fld@default\relax
13422 \let\Fld@value\relax
13423 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13424 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13425 \beginngroup
13426 \Fld@menulength=0 %
13427 \@tempdima\z@
13428 \@for\@curropt:=#3\do{%
13429 \expandafter\Fld@checkequals\@curropt==\%
13430 \Hy@StepCount\Fld@menulength
13431 \settowidth{\@tempdimb}{\@currDisplay}%
13432 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13433 }%
13434 \advance\@tempdima by 15\p@
13435 \beginngroup
13436 \HyField@SetKeys{#1}%
13437 \edef\x{\endgroup
13438 \noexpand\expandafter
13439 \noexpand\HyField@SetKeys
13440 \noexpand\expandafter{%
13441 \expandafter\noexpand\curname DefaultOptionsof%
13442 \ifFld@radio
13443 Radio%
13444 \else
13445 \ifFld@combo
13446 \ifFld@popdown
13447 PopdownBox%
13448 \else
13449 ComboBox%
13450 \fi
13451 \else
13452 ListBox%
13453 \fi
13454 \fi
13455 \endcurname
13456 }%
13457 }\x
13458 \HyField@SetKeys{#1}%
13459 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

13460 \ifx\Fld@value\relax
13461 \let\Fld@value\Fld@default
13462 \fi
13463 \LayoutChoiceField{#2}{%
13464 \ifFld@radio
13465 \HyField@FlagsRadioButton
13466 \@@Radio{#3}%
13467 \else
13468 \begingroup
13469 \HyField@FlagsChoice
13470 \ifdim\Fld@width<\@tempdima
13471 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13472 \edef\Fld@width{\the\@tempdima}%
13473 \fi
13474 \ifFld@combo
13475 \else
13476 \@tempdima=\the\Fld@menulength\Fld@charsize
13477 \advance\@tempdima by \Fld@borderwidth bp %
13478 \advance\@tempdima by \Fld@borderwidth bp %
13479 \edef\Fld@height{\the\@tempdima}%
13480 \fi
13481 \@@ListBox{#3}%
13482 \endgroup
13483 \fi
13484 }%
13485 \endgroup
13486 }
13487 \def\@@Radio#1{%
13488 \Fld@listcount=0 %
13489 \EdefEscapeName\Fld@default{\Fld@default}%
13490 \@for\@curropt:=#1\do{%
13491 \expandafter\Fld@checkequals\@curropt==\%
13492 \EdefEscapeName\@currValue{\@currValue}%
13493 \Hy@StepCount\Fld@listcount
13494 \@currDisplay\space
13495 \Hy@escapeform\PDFForm@Radio
13496 \ifnum\Fld@listcount=1 %
13497 \HyField@AdvanceAnnotCount
13498 \fi
13499 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13500 pdfmark=/ANN,%
13501 objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13502 Raw={%
13503 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13504 }%
13505 } % deliberate space between radio buttons
13506 \ifnum\Fld@listcount=1 %
13507 \HyField@AddToFields{radio}%
13508 \fi
13509 }%
13510 }
13511 \newcount\Fld@listcount
13512 \def\@@ListBox#1{%
13513 \HyField@PDFChoices{#1}%
13514 \Hy@escapeform\PDFForm@List
13515 \HyField@AdvanceAnnotCount
13516 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%

```

```

13517 pdfmark=/ANN,%
13518 objdef=list\HyField@TheAnnotCount,%
13519 Raw={\PDFForm@List}%
13520 }%
13521 \HyField@AddToFields{list}%
13522 }
13523 \def\@PushButton[#1]#2{% parameters, label
13524 \def\Fld@name{#2}%
13525 \begingroup
13526 \expandafter\HyField@SetKeys\expandafter{%
13527 \DefaultOptionsofPushButton,#1%
13528 }%
13529 \ifHy@pdfa
13530 \Hy@Error{%
13531 PDF/A: Push button with JavaScript is prohibited%
13532 } \@ehc
13533 \LayoutPushButtonField{%
13534 \leavevmode
13535 \MakeButtonField{#2}%
13536 }%
13537 \else
13538 \HyField@FlagsPushButton
13539 \ifFld@hidden\def\Fld@width{1sp}\fi
13540 \HyField@AdvanceAnnotCount
13541 \LayoutPushButtonField{%
13542 \leavevmode
13543 \Hy@escapeform\PDFForm@Push
13544 \pdfmark[\MakeButtonField{#2}]{%
13545 pdfmark=/ANN,%
13546 objdef=push\HyField@TheAnnotCount,%
13547 Raw={\PDFForm@Push}%
13548 }%
13549 }%
13550 \HyField@AddToFields{push}%
13551 \fi
13552 \endgroup
13553 }
13554 \def\@Submit[#1]#2{%
13555 \def\Fld@width{\DefaultWidthofSubmit}%
13556 \def\Fld@height{\DefaultHeightofSubmit}%
13557 \begingroup
13558 \expandafter\HyField@SetKeys\expandafter{%
13559 \DefaultOptionsofSubmit,#1%
13560 }%
13561 \HyField@FlagsPushButton
13562 \HyField@FlagsSubmit
13563 \ifFld@hidden\def\Fld@width{1sp}\fi
13564 \Hy@escapeform\PDFForm@Submit
13565 \HyField@AdvanceAnnotCount
13566 \pdfmark[\MakeButtonField{#2}]{%
13567 pdfmark=/ANN,%
13568 objdef=submit\HyField@TheAnnotCount,%
13569 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}%
13570 }%
13571 \HyField@AddToFields{submit}%
13572 \endgroup
13573 }

```

```

13574 \def\@Reset[#1]#2{%
13575   \def\Fld@width{\DefaultWidthofReset}%
13576   \def\Fld@height{\DefaultHeightofReset}%
13577   \begingroup
13578     \expandafter\HyField@SetKeys\expandafter{%
13579       \DefaultOptionsofReset,#1%
13580     }%
13581     \leavevmode
13582     \ifHy@pdfa
13583       \Hy@Error{%
13584         PDF/A: Reset action is prohibited%
13585       }\@ehc
13586       \MakeButtonField{#2}%
13587     \else
13588       \HyField@FlagsPushButton
13589       \ifFld@hidden\def\Fld@width{1sp}\fi
13590       \Hy@escapeform\PDFForm@Reset
13591       \HyField@AdvanceAnnotCount
13592       \pdfmark[\MakeButtonField{#2}]{%
13593         pdfmark=/ANN,%
13594         objdef=reset\HyField@TheAnnotCount,%
13595         Raw={\PDFForm@Reset}%
13596       }%
13597       \HyField@AddToFields{reset}%
13598     \fi
13599   \endgroup
13600 }%
13601 \def\@CheckBox[#1]#2{% parameters, label
13602   \def\Fld@name{#2}%
13603   \def\Fld@default{0}%
13604   \begingroup
13605     \def\Fld@width{\DefaultWidthofCheckBox}%
13606     \def\Fld@height{\DefaultHeightofCheckBox}%
13607     \expandafter\HyField@SetKeys\expandafter{%
13608       \DefaultOptionsofCheckBox,#1%
13609     }%
13610     \HyField@FlagsCheckBox
13611     \ifFld@hidden\def\Fld@width{1sp}\fi
13612     \HyField@AdvanceAnnotCount
13613     \LayoutCheckField{#2}{%
13614       \leavevmode
13615       \Hy@escapeform\PDFForm@Check
13616       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13617         pdfmark=/ANN,%
13618         objdef=check\HyField@TheAnnotCount,%
13619         Raw={\PDFForm@Check}%
13620       }%
13621     }%
13622     \HyField@AddToFields{check}%
13623   \endgroup
13624 }
13625 \pdfmark

```

48.2 HyperTeX

```

13626 \hypertex
13627 \def\@Form[#1]{%
13628   \Hy@Message{Sorry, HyperTeX does not support FORMs}%

```

```

13629 }
13630 \let\@endForm\ltx@empty
13631 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13632   \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13633 }
13634 \def\@TextField[#1]#2{% parameters, label
13635   \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13636 }
13637 \def\@CheckBox[#1]#2{% parameters, label
13638   \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13639 }
13640 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13641   \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13642 }
13643 \def\@PushButton[#1]#2{% parameters, label
13644   \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13645 }
13646 \def\@Reset[#1]#2{%
13647   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13648 }
13649 \def\@Submit[#1]#2{%
13650   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13651 }
13652 \</hypertex>

```

48.3 TeX4ht

```

13653 \*tex4ht
13654 \def\@Form[#1]{%
13655   \kvsetkeys{Form}{#1}%
13656   \HCode{<form action="\Form@action" method="\Form@method">}%
13657 }
13658 \def\@endForm{\HCode{</form>}}
13659 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13660   \Hy@Message{Sorry, TeX4ht does not support gauges}%
13661 }
13662 \def\@TextField[#1]#2{% parameters, label
13663   \let\Hy@reserved@a\@empty
13664   \def\Fld@name{#2}%
13665   \let\Fld@default\ltx@empty
13666   \bgroup
13667     \Field@toks={ }%
13668     \kvsetkeys{Field}{#1}%
13669     \HCode{<label for="\Fld@name">#2</label>}%
13670     \ifFld@password
13671       \@@PasswordField
13672     \else
13673       \@@TextField
13674     \fi
13675   \egroup
13676 }
13677 \def\@@PasswordField{%
13678   \HCode{%
13679     <input type="password" %
13680       id="\Fld@name" %
13681       name="\Fld@name" %
13682       \ifFld@hidden type="hidden" \fi
13683       value="\Fld@default" %

```

```

13684     \the\Field@toks
13685     >%
13686   }%
13687 }
13688 \def\@@TextField{%
13689   \ifFld@multiline
13690     \HCode{<textarea %
13691       \ifFld@readonly readonly \fi
13692       id="\Fld@name" %
13693       name="\Fld@name" %
13694       \ifFld@hidden type="hidden" \fi
13695       \the\Field@toks>%
13696   }%
13697   \Fld@default
13698   \HCode{</textarea>}%
13699 \else
13700   \HCode{<input type="text" %
13701     \ifFld@readonly readonly \fi
13702     id="\Fld@name" %
13703     name="\Fld@name" %
13704     \ifFld@hidden type="hidden" \fi
13705     value="\Fld@default" %
13706     \the\Field@toks>%
13707   }%
13708 \fi
13709 }
13710 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13711   \def\Fld@name{#2}%
13712   \let\Fld@default\ltx@empty
13713   \let\Hy@reserved@a\relax
13714   \begingroup
13715     \expandafter\Fld@findlength#3\\%
13716     \Field@toks={ }%
13717     \kvsetkeys{Field}{#1}%
13718     #2%
13719     \ifFld@radio
13720       \expandafter\@@Radio#3\\%
13721     \else
13722       \expandafter\@@Menu#3\\%
13723     \fi
13724   \endgroup
13725 }
13726 \def\Fld@findlength#1\\{%
13727   \Fld@menulength=0 %
13728   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13729 }
13730 \def\@@Menu#1\\{%
13731   \HCode{<select size="\the\Fld@menulength" %
13732     name="\Fld@name" %
13733     \the\Field@toks>%
13734   }%
13735   \@for\@curropt:=#1\do{%
13736     \expandafter\Fld@checkequals\@curropt==\\%
13737     \HCode{<option %
13738       \ifx\@curropt\Fld@default selected \fi
13739       value="\@currValue">\@currDisplay</option>%
13740     }%

```

```

13741 }%
13742 \HCode{</select>}%
13743 }
13744 \def\@@Radio#1\\{%
13745 \@for\@curropt:=#1\do{%
13746 \expandafter\Fld@checkequals\@curropt==\\%
13747 \HCode{<input type="radio" %
13748 \ifx\@curropt\Fld@default checked \fi
13749 name="\Fld@name" %
13750 value="\@currValue" %
13751 \the\Field@toks>%
13752 }%
13753 \@currDisplay
13754 }%
13755 }
13756 \def\@PushButton[#1]#2{% parameters, label
13757 \def\Fld@name{#2}%
13758 \bgroup
13759 \Field@toks={ }%
13760 \kvsetkeys{Field}{#1}%
13761 \HCode{<input type="button" %
13762 name="\Fld@name" %
13763 value="#2" %
13764 \the\Field@toks>%
13765 }%
13766 \HCode{</button>}%
13767 \egroup
13768 }
13769 \def\@Submit[#1]#2{%
13770 \HCode{<button type="submit">#2</button>}%
13771 }
13772 \def\@Reset[#1]#2{%
13773 \HCode{<button type="reset">#2</button>}%
13774 }
13775 \def\@CheckBox[#1]#2{% parameters, label
13776 \let\Hy@reserved@a\@empty
13777 \def\Fld@name{#2}%
13778 \def\Fld@default{0}%
13779 \bgroup
13780 \Field@toks={ }%
13781 \kvsetkeys{Field}{#1}%
13782 \HCode{<input type="checkbox" %
13783 \ifFld@checked checked \fi
13784 \ifFld@disabled disabled \fi
13785 \ifFld@readonly readonly \fi
13786 name="\Fld@name" %
13787 \ifFld@hidden type="hidden" \fi
13788 value="\Fld@default" %
13789 \the\Field@toks>%
13790 #2%
13791 }%
13792 \egroup
13793 }
13794 </tex4ht>

```

48.4 pdfTeX

```

13795 < *pdftex>

```

```

13796 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13797 \Hy@Message{Sorry, pdftex does not support FORM gauges}%
13798 }
13799 \def\MakeFieldObject#1#2{\sbox0{#1}%
13800 \immediate\pdfxform0 %
13801 \expandafter\edef\csname #2Object\endcsname{%
13802 \the\pdfastxform\space 0 R%
13803 }%
13804 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13805 }%
13806 \let\HyField@afields\ltx@empty
13807 \let\HyField@cofields\ltx@empty
13808 \begingroup\expandafter\expandafter\expandafter\endgroup
13809 \expandafter\ifx\csname pdfastlink\endcsname\relax
13810 \let\HyField@AddToFields\relax
13811 \PackageInfo{hyperref}{%
13812 You need pdfTeX 1.40.0 for setting the /Fields entry.%
13813 \MessageBreak
13814 Adobe Reader/Acrobat accepts an empty /Field array,%
13815 \MessageBreak
13816 but other PDF viewers might complain%
13817 }%
13818 \else
13819 \let\HyField@AuxAddToFields\ltx@gobble
13820 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13821 \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.

```

13822 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13823 \begingroup
13824 \Hy@safe@activestrue
13825 \let\ltx@secondoftwo\relax
13826 \ifx\HyField@cofields\ltx@empty
13827 \xdef\HyField@cofields{%
13828 \ltx@secondoftwo{#1}{ #2 0 R}%
13829 }%
13830 \else
13831 \let\ltx@secondoftwo\relax
13832 \def\HyField@AddCoField###1##2###3{%
13833 \ifx##1\ltx@empty
13834 \ltx@secondoftwo{#1}{ #2 0 R}%
13835 \expandafter\ltx@gobble
13836 \else
13837 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13838 \ltx@secondoftwo{#1}{ #2 0 R}%
13839 \ltx@secondoftwo{##2}{##3}%
13840 \expandafter\expandafter\expandafter\ltx@gobble
13841 \else
13842 \ltx@secondoftwo{##2}{##3}%
13843 \fi
13844 \fi
13845 \HyField@AddCoField
13846 }%
13847 \xdef\HyField@cofields{%
13848 \expandafter\HyField@AddCoField
13849 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13850 }%

```



```

13851 \fi
13852 \endgroup
13853 }%
13854 \Hy@AtBeginDocument{%
13855 \if@filesw
13856 \immediate\write\@mainaux{%
13857 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13858 }%
13859 \immediate\write\@mainaux{%
13860 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13861 }%
13862 \fi
13863 \let\HyField@AfterAuxOpen\@firstofone
13864 \def\HyField@AuxAddToFields#1{%
13865 \xdef\HyField@afields{%
13866 \ifx\HyField@afields\@empty
13867 \else
13868 \HyField@afields
13869 \space
13870 \fi
13871 #1 0 R%
13872 }%
13873 }%
13874 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13875 }%
13876 \def\HyField@AddToFields{%
13877 \expandafter\HyField@@AddToFields\expandafter{%
13878 \the\pdfastlink
13879 }%
13880 \ifx\Fld@calculate@code\ltx@empty
13881 \else
13882 \begingroup
13883 \Hy@safe@activestruer
13884 \edef\Hy@temp{%
13885 \endgroup
13886 \if@filesw
13887 \write\@mainaux{%
13888 \string\HyField@AuxAddToCoFields{%
13889 \Fld@calculate@sortkey
13890 }{%
13891 \the\pdfastlink
13892 }%
13893 }%
13894 \fi
13895 }%
13896 \Hy@temp
13897 \fi
13898 }%
13899 \def\HyField@@AddToFields#1{%
13900 \HyField@AfterAuxOpen{%
13901 \if@filesw
13902 \write\@mainaux{%
13903 \string\HyField@AuxAddToFields{#1}%
13904 }%
13905 \fi
13906 }%
13907 }%

```

```

13908 \fi
13909 \def\@Form[#1]{%
13910   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13911   \kvsetkeys{Form}{#1}%
13912   \pdf@ifdraftmode{}{%
13913     \Hy@FormObjects
13914     \ifnum\pdfTeXversion>13 %
13915       \pdfrefobj\OBJ@pdfdocencoding
13916       \pdfrefobj\OBJ@ZaDb
13917       \pdfrefobj\OBJ@Helv
13918     \fi
13919     \AtVeryEndDocument{%
13920       \immediate\pdfobj{%
13921         <<%
13922         /Fields[\HyField@afields]%
13923         \ifx\HyField@cofields\ltx@empty
13924         \else
13925           /CO[\romannumeral-`\Q\HyField@cofields]%
13926         \fi
13927         /DR<<%
13928         /Font<<%
13929         /ZaDb \OBJ@ZaDb\space 0 R%
13930         /Helv \OBJ@Helv\space 0 R%
13931         >>%
13932       >>%
13933       /DA(/Helv 10 Tf 0 g)%
13934       \ifHy@pdfa
13935       \else
13936         \ifHyField@NeedAppearances
13937         /NeedAppearances true%
13938       \fi
13939       \fi
13940       >>%
13941     }%
13942     \edef\OBJ@acroform{\the\pdfastobj}%
13943     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13944   }%
13945 }%
13946 \MakeFieldObject{%
Same as \ding{123} of package pifont.
13947   \begingroup
13948     \fontfamily{pzd}%
13949     \fontencoding{U}%
13950     \fontseries{m}%
13951     \fontshape{n}%
13952     \selectfont
13953     \char123 %
13954   \endgroup
13955 }{Ding}%
13956 \MakeFieldObject{%
13957   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13958 }{Submit}%
13959 \MakeFieldObject{%
13960   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13961 }{SubmitP}%
13962 }
13963 \let\@endForm\ltx@empty

```

```

13964 \let\HyAnn@AbsPageLabel\ltx@empty
13965 \let\Fld@pageobjref\ltx@empty
13966 \ltx@ifundefined{pdfpageref}{%
13967 }{%
13968 \ltx@ifpackageloaded{zref-abspage}{%
13969 \newcount\HyAnn@Count
13970 \HyAnn@Count=\ltx@zero
13971 \def\HyAnn@AbsPageLabel{%
13972 \global\advance\HyAnn@Count by\ltx@one
13973 \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13974 \zref@refused{HyAnn@\the\HyAnn@Count}%
13975 }%
13976 \def\Fld@pageobjref{%
13977 \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13978 }{%
13979 \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13980 /P \pdfpageref
13981 \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13982 \space 0 R%
13983 }{%
13984 }%
13985 }%
13986 }%
13987 }{%
13988 }%
13989 }

13990 \def\@TextField[#1]#2{% parameters, label
13991 \def\Fld@name{#2}%
13992 \let\Fld@default\ltx@empty
13993 \let\Fld@value\@empty
13994 \def\Fld@width{\DefaultWidthofText}%
13995 \def\Fld@height{%
13996 \ifFld@multiline
13997 \DefaultHeightofTextMultiline
13998 \else
13999 \DefaultHeightofText
14000 \fi
14001 }%
14002 \begingroup
14003 \expandafter\HyField@SetKeys\expandafter{%
14004 \DefaultOptionsofText,#1%
14005 }%
14006 \PDFForm@Name
14007 \HyField@FlagsText
14008 \ifFld@hidden\def\Fld@width{1sp}\fi
14009 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14010 \LayoutTextField{#2}{%
14011 \leavevmode
14012 \HyAnn@AbsPageLabel
14013 \Hy@escapeform\PDFForm@Text
14014 \pdfstartlink user {\PDFForm@Text}\relax
14015 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14016 \HyField@AddToFields
14017 }%
14018 \endgroup
14019 }
14020 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

14021 \def\Fld@name{#2}%
14022 \let\Fld@default\relax
14023 \let\Fld@value\relax
14024 \def\Fld@width{\DefaultWidthofChoiceMenu}%
14025 \def\Fld@height{\DefaultHeightofChoiceMenu}%
14026 \begingroup
14027 \Fld@menulength=0 %
14028 \@tempdima\z@
14029 \@for\@curropt:=#3\do{%
14030 \expandafter\Fld@checkequals\@curropt==\%
14031 \Hy@StepCount\Fld@menulength
14032 \settowidth{\@tempdimb}{\@currDisplay}%
14033 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14034 }%
14035 \advance\@tempdima by 15\p@
14036 \begingroup
14037 \HyField@SetKeys{#1}%
14038 \edef\x{\endgroup
14039 \noexpand\expandafter
14040 \noexpand\HyField@SetKeys
14041 \noexpand\expandafter{%
14042 \expandafter\noexpand\csname DefaultOptionsof%
14043 \ifFld@radio
14044 Radio%
14045 \else
14046 \ifFld@combo
14047 \ifFld@popdown
14048 PopdownBox%
14049 \else
14050 ComboBox%
14051 \fi
14052 \else
14053 ListBox%
14054 \fi
14055 \fi
14056 \endcsname
14057 }%
14058 }\x
14059 \HyField@SetKeys{#1}%
14060 \PDFForm@Name
14061 \ifFld@hidden\def\Fld@width{1sp}\fi
14062 \ifx\Fld@value\relax
14063 \let\Fld@value\Fld@default
14064 \fi
14065 \LayoutChoiceField{#2}{%
14066 \ifFld@radio
14067 \HyField@FlagsRadioButton
14068 \@@Radio{#3}%
14069 \else
14070 \begingroup
14071 \HyField@FlagsChoice
14072 \ifdim\Fld@width<\@tempdima
14073 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14074 \edef\Fld@width{\the\@tempdima}%
14075 \fi
14076 \ifFld@combo
14077 \else

```

```

14078      \@tempdima=\the\Fld@menulength\Fld@charsize
14079      \advance\@tempdima by \Fld@borderwidth bp %
14080      \advance\@tempdima by \Fld@borderwidth bp %
14081      \edef\Fld@height{\the\@tempdima}%
14082      \fi
14083      \@@ListBox{#3}%
14084      \endgroup
14085      \fi
14086      }%
14087      \endgroup
14088      }
14089      \def\@@Radio#1{%
14090      \Fld@listcount=0 %
14091      \EdefEscapeName\Fld@default{\Fld@default}%
14092      \@for\@curropt:=#1\do{%
14093      \expandafter\Fld@checkequals\@curropt==\%
14094      \EdefEscapeName\@currValue{\@currValue}%
14095      \Hy@StepCount\Fld@listcount
14096      \@currDisplay\space
14097      \leavevmode
14098      \HyAnn@AbsPageLabel
14099      \Hy@escapeform\PDFForm@Radio
14100      \pdfstartlink user {%
14101      \PDFForm@Radio
14102      /AP<<%
14103      /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.

```

14104      /\@currValue\space \DingObject
14105      >>%
14106      >>%
14107      }%
14108      \relax
14109      \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14110      \ifnum\Fld@listcount=1 %
14111      \HyField@AddToFields
14112      \fi
14113      \space % deliberate space between radio buttons
14114      }%
14115      }
14116      \newcount\Fld@listcount
14117      \def\@@ListBox#1{%
14118      \HyField@PDFChoices{#1}%
14119      \leavevmode
14120      \HyAnn@AbsPageLabel
14121      \Hy@escapeform\PDFForm@List
14122      \pdfstartlink user {\PDFForm@List}\relax
14123      \MakeChoiceField{\Fld@width}{\Fld@height}%
14124      \pdfendlink
14125      \HyField@AddToFields
14126      }
14127      \def\@PushButton[#1]#2{% parameters, label
14128      \def\Fld@name{#2}%
14129      \begingroup
14130      \expandafter\HyField@SetKeys\expandafter{%
14131      \DefaultOptionsofPushButton,#1%

```

```

14132 }%
14133 \PDFForm@Name
14134 \ifHy@pdfa
14135 \Hy@Error{%
14136 PDF/A: Push button with JavaScript is prohibited%
14137 } \@ehc
14138 \LayoutPushButtonField{%
14139 \leavevmode
14140 \MakeButtonField{#2}%
14141 }%
14142 \else
14143 \HyField@FlagsPushButton
14144 \ifFld@hidden\def\Fld@width{1sp}\fi
14145 \LayoutPushButtonField{%
14146 \leavevmode
14147 \HyAnn@AbsPageLabel
14148 \Hy@escapeform\PDFForm@Push
14149 \pdfstartlink user {\PDFForm@Push}\relax
14150 \MakeButtonField{#2}%
14151 \pdfendlink
14152 \HyField@AddToFields
14153 }%
14154 \fi
14155 \endgroup
14156 }
14157 \def\@Submit[#1]#2{%
14158 \def\Fld@width{\DefaultWidthofSubmit}%
14159 \def\Fld@height{\DefaultHeightofSubmit}%
14160 \begingroup
14161 \expandafter\HyField@SetKeys\expandafter{%
14162 \DefaultOptionsofSubmit,#1%
14163 }%
14164 \HyField@FlagsPushButton
14165 \HyField@FlagsSubmit
14166 \ifFld@hidden\def\Fld@width{1sp}\fi
14167 \leavevmode
14168 \HyAnn@AbsPageLabel
14169 \Hy@escapeform\PDFForm@Submit
14170 \pdfstartlink user {%
14171 \PDFForm@Submit
14172 /AP<</N \SubmitObject/D \SubmitPObject>>%
14173 }%
14174 \relax
14175 \MakeButtonField{#2}%
14176 \pdfendlink
14177 \HyField@AddToFields
14178 \endgroup
14179 }
14180 \def\@Reset[#1]#2{%
14181 \def\Fld@width{\DefaultWidthofReset}%
14182 \def\Fld@height{\DefaultHeightofReset}%
14183 \begingroup
14184 \expandafter\HyField@SetKeys\expandafter{%
14185 \DefaultOptionsofReset,#1%
14186 }%
14187 \leavevmode
14188 \ifHy@pdfa

```

```

14189 \Hy@Error{%
14190 PDF/A: Reset action is prohibited%
14191 } \@ehc
14192 \MakeButtonField{#2}%
14193 \else
14194 \HyField@FlagsPushButton
14195 \ifFld@hidden\def\Fld@width{1sp}\fi
14196 \HyAnn@AbsPageLabel
14197 \Hy@escapeform\PDFForm@Reset
14198 \pdfstartlink user {\PDFForm@Reset}\relax
14199 \MakeButtonField{#2}%
14200 \pdfendlink
14201 \HyField@AddToFields
14202 \fi
14203 \endgroup
14204 }
14205 \def\@CheckBox[#1]#2{% parameters, label
14206 \def\Fld@name{#2}%
14207 \def\Fld@default{0}%
14208 \begingroup
14209 \def\Fld@width{\DefaultWidthofCheckBox}%
14210 \def\Fld@height{\DefaultHeightofCheckBox}%
14211 \expandafter\HyField@SetKeys\expandafter{%
14212 \DefaultOptionsofCheckBox,#1%
14213 }%
14214 \PDFForm@Name
14215 \HyField@FlagsCheckBox
14216 \ifFld@hidden\def\Fld@width{1sp}\fi
14217 \LayoutCheckField{#2}{%
14218 \leavevmode
14219 \HyAnn@AbsPageLabel
14220 \Hy@escapeform\PDFForm@Check
14221 \pdfstartlink user {\PDFForm@Check}\relax
14222 \MakeCheckField{\Fld@width}{\Fld@height}%
14223 \pdfendlink
14224 \HyField@AddToFields
14225 }%
14226 \endgroup
14227 }
14228 \def\Hy@FormObjects{%
14229 \pdfobj {%
14230 <<%
14231 /Type/Encoding%
14232 /Differences[%
14233 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14234 /ring/tilde %
14235 39/quotesingle %
14236 96/grave %
14237 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14238 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14239 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14240 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14241 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14242 164/currency %
14243 166/brokenbar %
14244 168/dieresis/copyright/ordfeminine %
14245 172/logicalnot/.notdef/registered/macron/degree/plusminus%

```

```

14246      /twosuperior/threesuperior/acute/mu %
14247      183/periodcentered/cedilla/onesuperior/ordmasculine %
14248      188/onequarter/onehalf/threequarters %
14249      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14250      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14251      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14252      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14253      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14254      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14255      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14256      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14257      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
14258      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14259      ]%
14260    >>%
14261  }%
14262  \xdef\OBJ@pdfdocencoding{\the\pdfflastobj}%
14263  \pdfobj{%
14264    <<%
14265      /Type/Font%
14266      /Subtype/Type1%
14267      /Name/ZaDb%
14268      /BaseFont/ZapfDingbats%
14269    >>%
14270  }%
14271  \xdef\OBJ@ZaDb{\the\pdfflastobj}%
14272  \pdfobj{%
14273    <<%
14274      /Type/Font%
14275      /Subtype/Type1%
14276      /Name/Helv%
14277      /BaseFont/Helvetica%
14278      /Encoding \OBJ@pdfdocencoding\space 0 R%
14279    >>%
14280  }%
14281  \xdef\OBJ@Helv{\the\pdfflastobj}%
14282  \global\let\Hy@FormObjects\relax
14283 }
14284 </pdfTeX>

```

48.5 dvipdfm, xetex

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

```

14285 (*dvipdfm | xetex)

```

\@Gauge

```

14286 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14287   \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14288 }

```

\@Form

```

14289 \def\@Form[#1]{%
14290   \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14291   \kvsetkeys{Form}{#1}%
14292   \Hy@FormObjects
14293   \@pdfm@mark{obj @afields []}%
14294   \@pdfm@mark{obj @corder []}%

```



```

14295 \@pdfm@mark{%
14296   obj @aform <<%
14297   /Fields @afields%
14298   /DR<<%
14299   /Font<<%
14300   /ZaDb @OBJZaDb%
14301   /Helv @OBJHelv%
14302   >>%
14303   >>%
14304   /DA(/Helv 10 Tf 0 g)%
14305   /CO @corder%
14306   \ifHy@pdfa
14307   \else
14308     \ifHyField@NeedAppearances
14309       /NeedAppearances true%
14310     \fi
14311   \fi
14312   >>%
14313 }%
14314 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
14315 }

```

\@endForm

```

14316 \let\@endForm\ltx@empty

```

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

```

14317 \def\dvipdfm@setdim{%
14318   height \the\ht\pdfm@box\space
14319   width \the\wd\pdfm@box\space
14320   depth \the\dp\pdfm@box\space
14321 }

```

\HyField@AnnotCount

```

14322 \newcount\HyField@AnnotCount
14323 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

14324 \def\HyField@AdvanceAnnotCount{%
14325   \global\advance\HyField@AnnotCount\@ne
14326 }

```

\HyField@TheAnnotCount

```

14327 \def\HyField@TheAnnotCount{%
14328   \the\HyField@AnnotCount
14329 }

```

\Fld@pageobjref

```

14330 \def\Fld@pageobjref{/P @thispage}%

```

\HyField@AddToFields

```

14331 \def\HyField@AddToFields#1{%
14332   \@pdfm@mark{put @afields @#1\HyField@TheAnnotCount}%
14333   \ifx\Fld@calculate@code\ltx@empty
14334   \else
14335     \@pdfm@mark{put @corder @#1\HyField@TheAnnotCount}%
14336   \fi
14337 }

```

\@TextField

```

14338 \def\@TextField[#1]#2{% parameters, label
14339   \def\Fld@name{#2}%
14340   \let\Fld@default\ltx@empty
14341   \let\Fld@value\@empty
14342   \def\Fld@width{\DefaultWidthofText}%
14343   \def\Fld@height{%
14344     \ifFld@multiline
14345       \DefaultHeightofTextMultiline
14346     \else
14347       \DefaultHeightofText
14348     \fi
14349   }%
14350   \begingroup
14351     \expandafter\HyField@SetKeys\expandafter{%
14352       \DefaultOptionsofText,#1%
14353     }%
14354     \PDFForm@Name
14355     \HyField@FlagsText
14356     \ifFld@hidden\def\Fld@width{1sp}\fi
14357     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14358     \setbox\pdfm@box=\hbox{%
14359       \MakeTextField{\Fld@width}{\Fld@height}%
14360     }%
14361     \HyField@AdvanceAnnotCount
14362     \LayoutTextField{#2}{%
14363       \leavevmode
14364       \Hy@escapeform\PDFForm@Text
14365       \@pdfm@mark{%
14366         ann @text\HyField@TheAnnotCount\space
14367         \dvipdfm@setdim << \PDFForm@Text >>%
14368       }%
14369     }%
14370     \unhbox\pdfm@box
14371     \HyField@AddToFields{text}%
14372     % record in @afields array
14373   \endgroup
14374 }

```

\@ChoiceMenu

```

14375 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14376   \def\Fld@name{#2}%
14377   \let\Fld@default\relax
14378   \let\Fld@value\relax
14379   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14380   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14381   \begingroup
14382     \Fld@menulength=0 %
14383     \@tempdima\z@
14384     \@for\@curropt:=#3\do{%
14385       \expandafter\Fld@checkequals\@curropt==\\%
14386       \Hy@StepCount\Fld@menulength
14387       \settowidth{\@tempdimb}{\@currDisplay}%
14388       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14389     }%
14390     \advance\@tempdima by 15\p@
14391   \begingroup

```

```

14392 \HyField@SetKeys{#1}%
14393 \edef\x{\endgroup
14394 \noexpand\expandafter
14395 \noexpand\HyField@SetKeys
14396 \noexpand\expandafter{%
14397 \expandafter\noexpand\csname DefaultOptionsof%
14398 \ifFld@radio
14399 Radio%
14400 \else
14401 \ifFld@combo
14402 \ifFld@popdown
14403 PopdownBox%
14404 \else
14405 ComboBox%
14406 \fi
14407 \else
14408 ListBox%
14409 \fi
14410 \fi
14411 \endcsname
14412 }%
14413 }\x
14414 \HyField@SetKeys{#1}%
14415 \PDFForm@Name
14416 \ifFld@hidden\def\Fld@width{1sp}\fi
14417 \ifx\Fld@value\relax
14418 \let\Fld@value\Fld@default
14419 \fi
14420 \LayoutChoiceField{#2}{%
14421 \ifFld@radio
14422 \HyField@FlagsRadioButton
14423 \@@Radio{#3}%
14424 \else
14425 \begingroup
14426 \HyField@FlagsChoice
14427 \ifdim\Fld@width<\@tempdima
14428 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14429 \edef\Fld@width{\the\@tempdima}%
14430 \fi
14431 \ifFld@combo
14432 \else
14433 \@tempdima=\the\Fld@menulength\Fld@charsize
14434 \advance\@tempdima by \Fld@borderwidth bp %
14435 \advance\@tempdima by \Fld@borderwidth bp %
14436 \edef\Fld@height{\the\@tempdima}%
14437 \fi
14438 \@@ListBox{#3}%
14439 \endgroup
14440 \fi
14441 }%
14442 \endgroup
14443 }

```

\@@Radio

```

14444 \def\@@Radio#1{%
14445 \Fld@listcount=0 %
14446 \EdefEscapeName\Fld@default{\Fld@default}%
14447 \setbox\pdfm@box=\hbox{%

```

```

14448 \MakeRadioField{\Fld@width}{\Fld@height}%
14449 }%
14450 \@for\@curropt:=#1\do{%
14451 \expandafter\Fld@checkequals\@curropt==\%
14452 \EdefEscapeName\@currValue{\@currValue}%
14453 \Hy@StepCount\Fld@listcount
14454 \@currDisplay\space
14455 \leavevmode
14456 \Hy@escapeform\PDFForm@Radio
14457 \ifnum\Fld@listcount=1 %
14458 \HyField@AdvanceAnnotCount
14459 \fi
14460 \@pdfm@mark{%
14461 ann %
14462 \ifnum\Fld@listcount=1 %
14463 @radio\HyField@TheAnnotCount%
14464 \space
14465 \fi
14466 \dvipdfm@setdim
14467 <<%
14468 \PDFForm@Radio
14469 /AP<</N<</\@currValue /null>>>%
14470 >>%
14471 }%
14472 \unhcopy\pdfm@box\space% deliberate space between radio buttons
14473 \ifnum\Fld@listcount=1 %
14474 \HyField@AddToFields{radio}%
14475 \fi
14476 }%
14477 }

\Fld@listcount
14478 \newcount\Fld@listcount

\@@ListBox
14479 \def\@@ListBox#1{%
14480 \HyField@PDFChoices{#1}%
14481 \setbox\pdfm@box=\hbox{%
14482 \MakeChoiceField{\Fld@width}{\Fld@height}%
14483 }%
14484 \leavevmode
14485 \Hy@escapeform\PDFForm@List
14486 \HyField@AdvanceAnnotCount
14487 \@pdfm@mark{%
14488 ann @list\HyField@TheAnnotCount\space
14489 \dvipdfm@setdim
14490 <<\PDFForm@List>>%
14491 }%
14492 \unhbox\pdfm@box
14493 \HyField@AddToFields{list}%
14494 }

\@PushButton
14495 \def\@PushButton[#1]#2{% parameters, label
14496 \def\Fld@name{#2}%
14497 \begingroup
14498 \expandafter\HyField@SetKeys\expandafter{%

```

```

14499     \DefaultOptionsofPushButton,#1%
14500 }%
14501 \PDFForm@Name
14502 \ifHy@pdfa
14503   \Hy@Error{%
14504     PDF/A: Push button with JavaScript is prohibited%
14505   }\@ehc
14506   \LayoutPushButtonField{%
14507     \leavevmode
14508     \MakeButtonField{#2}%
14509   }%
14510 \else
14511   \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14512   \HyField@FlagsPushButton
14513   \ifFld@hidden\def\Fld@width{1sp}\fi
14514   \HyField@AdvanceAnnotCount
14515   \LayoutPushButtonField{%
14516     \leavevmode
14517     \Hy@escapeform\PDFForm@Push
14518     \@pdfm@mark{%
14519       ann @push\HyField@TheAnnotCount\space
14520       \dvipdfm@setdim
14521       <<\PDFForm@Push>>%
14522     }%
14523   }%
14524   \unhbox\pdfm@box
14525   \HyField@AddToFields{push}%
14526 \fi
14527 \endgroup
14528 }

\@Submit
14529 \def\@Submit[#1]#2{%
14530   \def\Fld@width{\DefaultWidthofSubmit}%
14531   \def\Fld@height{\DefaultHeightofSubmit}%
14532   \begingroup
14533     \expandafter\HyField@SetKeys\expandafter{%
14534       \DefaultOptionsofSubmit,#1%
14535     }%
14536     \HyField@FlagsPushButton
14537     \HyField@FlagsSubmit
14538     \ifFld@hidden\def\Fld@width{1sp}\fi
14539     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14540     \leavevmode
14541     \Hy@escapeform\PDFForm@Submit
14542     \HyField@AdvanceAnnotCount
14543     \@pdfm@mark{%
14544       ann @submit\HyField@TheAnnotCount\space
14545       \dvipdfm@setdim
14546       <<\PDFForm@Submit>>%
14547     }%
14548     \unhbox\pdfm@box%
14549     \HyField@AddToFields{submit}%
14550   \endgroup
14551 }

\@Reset

```

```

14552 \def\@Reset[#1]#2{%
14553   \def\Fld@width{\DefaultWidthofReset}%
14554   \def\Fld@height{\DefaultHeightofReset}%
14555   \begingroup
14556     \expandafter\HyField@SetKeys\expandafter{%
14557       \DefaultOptionsofReset,#1%
14558     }%
14559     \leavevmode
14560     \ifHy@pdfa
14561       \Hy@Error{%
14562         PDF/A: Reset action is prohibited%
14563       }\@ehc
14564       \MakeButtonField{#2}%
14565     \else
14566       \HyField@FlagsPushButton
14567       \ifFld@hidden\def\Fld@width{1sp}\fi
14568       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14569       \Hy@escapeform\PDFForm@Reset
14570       \HyField@AdvanceAnnotCount
14571       \@pdfm@mark{%
14572         ann @reset\HyField@TheAnnotCount\space
14573         \dvipdfm@setdim
14574         <<\PDFForm@Reset>>%
14575       }%
14576       \unhbox\pdfm@box
14577       \HyField@AddToFields{reset}%
14578     \fi
14579   \endgroup
14580 }

```

\@CheckBox

```

14581 \def\@CheckBox[#1]#2{% parameters, label
14582   \def\Fld@name{#2}%
14583   \def\Fld@default{0}%
14584   \begingroup
14585     \def\Fld@width{\DefaultWidthofCheckBox}%
14586     \def\Fld@height{\DefaultHeightofCheckBox}%
14587     \expandafter\HyField@SetKeys\expandafter{%
14588       \DefaultOptionsofCheckBox,#1%
14589     }%
14590     \PDFForm@Name
14591     \HyField@FlagsCheckBox
14592     \ifFld@hidden\def\Fld@width{1sp}\fi
14593     \setbox\pdfm@box=\hbox{%
14594       \MakeCheckField{\Fld@width}{\Fld@height}%
14595     }%
14596     \HyField@AdvanceAnnotCount
14597     \LayoutCheckField{#2}{%
14598       \leavevmode
14599       \Hy@escapeform\PDFForm@Check
14600       \@pdfm@mark{%
14601         ann @check\HyField@TheAnnotCount\space
14602         \dvipdfm@setdim
14603         <<\PDFForm@Check>>%
14604       }%
14605       \unhbox\pdfm@box
14606       \HyField@AddToFields{check}%
14607     }%

```

```

14608 \endgroup
14609 }

14610 \def\Hy@FormObjects{%
14611 \@pdfm@mark{obj @OBJpdfdocencoding%
14612 <<%
14613 /Type/Encoding%
14614 /Differences[%
14615 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14616 39/quotesingle %
14617 96/grave %
14618 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14619 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14620 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14621 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14622 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14623 164/currency %
14624 166/brokenbar %
14625 168/dieresis/copyright/ordfeminine %
14626 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14627 /twosuperior/threesuperior/acute/mu %
14628 183/periodcentered/cedilla/onesuperior/ordmasculine %
14629 188/onequarter/onehalf/threequarters %
14630 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14631 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14632 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14633 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14634 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14635 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14636 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14637 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14638 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14639 /thorn/ydieresis%
14640 ]%
14641 >>%
14642 }%
14643 \@pdfm@mark{obj @OBJZaDb%
14644 <<%
14645 /Type/Font%
14646 /Subtype/Type1%
14647 /Name/ZaDb%
14648 /BaseFont/ZapfDingbats%
14649 >>%
14650 }%
14651 \@pdfm@mark{obj @OBJHelv%
14652 <<%
14653 /Type/Font%
14654 /Subtype/Type1%
14655 /Name/Helv%
14656 /BaseFont/Helvetica%
14657 /Encoding @OBJpdfdocencoding%
14658 >>%
14659 }%
14660 \global\let\Hy@FormObjects\relax
14661 }
14662 </dvipdfm | xetex>

```

48.6 Common forms part

14663 $\langle *pdfform \rangle$

$\backslash Fld@pageobjref$

14664 $\backslash providecommand*{\backslash Fld@pageobjref}\{\}$

$\backslash Hy@escapestring$

```

14665 \begingroup\expandafter\expandafter\expandafter\endgroup
14666 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14667   \let\Hy@escapestring\@firstofone
14668   \def\Hy@escapeform#1{%
14669     \ifHy@pdfescapeform
14670       \def\Hy@escapestring##1{%
14671         \noexpand\Hy@escapestring{\noexpand##1}%
14672       }%
14673       \edef\Hy@temp{#1}%
14674       \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
14675     \def\Hy@escapestring##1{%
14676       \@ifundefined{Hy@esc@\string##1}{%
14677         ##1%
14678         \ThisShouldNotHappen
14679       }{%
14680         \csname Hy@esc@\string##1\endcsname
14681       }%
14682     }%
14683   \else
14684     \let\Hy@escapestring\@firstofone
14685   \fi
14686 }%
14687 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14688   \ifx\#3\%
14689     \else
14690       \expandafter
14691       \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14692       \ltx@ReturnAfterFi{%
14693         \Hy@@escapeform#3\@nil
14694       }%
14695     \fi
14696   }%
14697 \else
14698   \def\Hy@escapeform#1{%
14699     \ifHy@pdfescapeform
14700       \let\Hy@escapestring\pdfescapestring
14701     \else
14702       \let\Hy@escapestring\@firstofone
14703     \fi
14704   }%
14705   \Hy@escapeform{}%
14706 \fi

```

$\backslash PDFForm@Name$

```

14707 \def\PDFForm@Name{%
14708   \PDFForm@@Name\Fld@name
14709   \ifx\Fld@altname\relax
14710     \else
14711     \PDFForm@@Name\Fld@altname
14712   \fi

```



```

14713 \ifx\Fld@mappingname\relax
14714 \else
14715 \PDFForm@@Name\Fld@mappingname
14716 \fi
14717 }

```

\PDFForm@@Name

```

14718 \def\PDFForm@@Name#1{%
14719 \begingroup
14720 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14721 \ifHy@unicode
14722 \Hy@unicodetrue
14723 \fi
14724 \fi
14725 \HyPsd@XeTeXBigCharstrue
14726 \pdfstringdef\Hy@gtemp#1%
14727 \endgroup
14728 \let#1\Hy@gtemp
14729 }

```

\Fld@additionalactions

```

14730 \def\Fld@@additionalactions{%
K input (keystroke) format
14731 \ifx\Fld@keystroke@code\@empty
14732 \else
14733 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14734 \fi
F display format
14735 \ifx\Fld@format@code\@empty
14736 \else
14737 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14738 \fi
V validation
14739 \ifx\Fld@validate@code\@empty
14740 \else
14741 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14742 \fi
C calculation
14743 \ifx\Fld@calculate@code\@empty
14744 \else
14745 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14746 \fi
Fo receiving the input focus
14747 \ifx\Fld@onfocus@code\@empty
14748 \else
14749 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14750 \fi
Bl loosing the input focus (blurred)
14751 \ifx\Fld@onblur@code\@empty
14752 \else
14753 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14754 \fi

```

D pressing the mouse button (down)

```
14755 \ifx\Fld@onmousedown@code\@empty
14756 \else
14757 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14758 \fi
```

U releasing the mouse button (up)

```
14759 \ifx\Fld@onmouseup@code\@empty
14760 \else
14761 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14762 \fi
```

E cursor enters the annotation's active area.

```
14763 \ifx\Fld@onenter@code\@empty
14764 \else
14765 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14766 \fi
```

X cursor exits the annotation's active area.

```
14767 \ifx\Fld@onexit@code\@empty
14768 \else
14769 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14770 \fi
```

```
14771 }
14772 \def\Fld@additionalactions{%
14773 \if-\Fld@@additionalactions-%
14774 \else
14775 \ifHy@pdfa
14776 \else
14777 /AA<<\Fld@@additionalactions>>%
14778 \fi
14779 \fi
14780 }
```

\Fld@annotnames

```
14781 \def\Fld@annotnames{%
14782 /T(\Fld@name)%
14783 \ifx\Fld@altname\relax
14784 \else
14785 /TU(\Fld@altname)%
14786 \fi
14787 \ifx\Fld@mappingname\relax
14788 \else
14789 /TM(\Fld@mappingname)%
14790 \fi
14791 }
```

\PDFForm@Check

```
14792 \def\PDFForm@Check{%
14793 /Subtype/Widget%
14794 \Fld@annotflags
14795 \Fld@pageobjref
14796 \Fld@annotnames
14797 /FT/Btn%
14798 \Fld@flags
14799 /Q \Fld@align
14800 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14801 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
```

```

14802 /MK<<%
14803   \ifnum\Fld@rotation=\z@
14804   \else
14805     /R \Fld@rotation
14806   \fi
14807   \ifx\Fld@bordercolor\relax
14808   \else
14809     /BC[\Fld@bordercolor]%
14810   \fi
14811   \ifx\Fld@bcolor\relax
14812   \else
14813     /BG[\Fld@bcolor]%
14814   \fi
14815   /CA(\Hy@escapestring{\Fld@cbsymbol})%
14816 >>%
14817 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14818   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14819 /H/P%
14820 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14821 \Fld@additionalactions
14822 }

```

\PDFForm@Push

```

14823 \ifHy@pdfa
14824 \else
14825   \def\PDFForm@Push{%
14826     /Subtype/Widget%
14827     \Fld@annotflags
14828     \Fld@pageobjref
14829     \Fld@annotnames
14830     /FT/Btn%
14831     \Fld@flags
14832     /H/P%
14833     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14834     \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
14835       \ifx\Fld@bordercolor\relax\else 1\fi
14836       \space
14837     \else
14838       /MK<<%
14839       \ifnum\Fld@rotation=\z@
14840       \else
14841         /R \Fld@rotation
14842       \fi
14843       \ifx\Fld@bordercolor\relax
14844       \else
14845         /BC[\Fld@bordercolor]%
14846       \fi
14847       >>%
14848     \fi
14849     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14850     \Fld@additionalactions
14851   }%
14852 \fi

```

\PDFForm@List

```

14853 \def\PDFForm@List{%
14854   /Subtype/Widget%

```

```

14855 \Fld@annotflags
14856 \Fld@pageobjref
14857 \Fld@annotnames
14858 /FT/Ch%
14859 \Fld@flags
14860 /Q \Fld@align
14861 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14862 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14863     \ifx\Fld@bordercolor\relax\else 1\fi
14864     \ifx\Fld@bcolor\relax \else 1\fi
14865     \space
14866 \else
14867     /MK<<%
14868     \ifnum\Fld@rotation=\z@
14869     \else
14870     /R \Fld@rotation
14871     \fi
14872     \ifx\Fld@bordercolor\relax
14873     \else
14874     /BC[\Fld@bordercolor]%
14875     \fi
14876     \ifx\Fld@bcolor\relax
14877     \else
14878     /BG[\Fld@bcolor]%
14879     \fi
14880 >>%
14881 \fi
14882 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14883     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14884 \Fld@choices
14885 \Fld@additionalactions
14886 }

```

\PDFForm@Radio

```

14887 \def\PDFForm@Radio{%
14888 /Subtype/Widget%
14889 \Fld@annotflags
14890 \Fld@pageobjref
14891 \Fld@annotnames
14892 /FT/Btn%
14893 \Fld@flags
14894 /H/P%
14895 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14896 /MK<<%
14897     \ifnum\Fld@rotation=\z@
14898     \else
14899     /R \Fld@rotation
14900     \fi
14901     \ifx\Fld@bordercolor\relax
14902     \else
14903     /BC[\Fld@bordercolor]%
14904     \fi
14905     \ifx\Fld@bcolor\relax
14906     \else
14907     /BG[\Fld@bcolor]%
14908     \fi
14909     /CA(\Hy@escapestring{\Fld@radiosymbol})%
14910 >>%

```

```

14911 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14912 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14913 \ifx\Fld@default\@empty
14914 /V/Off%
14915 /DV/Off%
14916 \else
14917 /V/\Fld@default
14918 /DV/\Fld@default
14919 \fi
14920 \Fld@additionalactions
14921 }

```

\PDFForm@Text

```

14922 \def\PDFForm@Text{%
14923 /Subtype/Widget%
14924 \Fld@annotflags
14925 \Fld@pageobjref
14926 \Fld@annotnames
14927 /FT/Tx%
14928 \Fld@flags
14929 /Q \Fld@align
14930 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14931 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14932 \ifx\Fld@bordercolor\relax\else 1\fi
14933 \ifx\Fld@bcolor\relax \else 1\fi
14934 \space
14935 \else
14936 /MK<<%
14937 \ifnum\Fld@rotation=\z@
14938 \else
14939 /R \Fld@rotation
14940 \fi
14941 \ifx\Fld@bordercolor\relax
14942 \else
14943 /BC[\Fld@bordercolor]%
14944 \fi
14945 \ifx\Fld@bcolor\relax
14946 \else
14947 /BG[\Fld@bcolor]%
14948 \fi
14949 >>%
14950 \fi
14951 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14952 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14953 /DV(\Hy@escapestring{\Fld@default})%
14954 /V(\Hy@escapestring{\Fld@value})%
14955 \Fld@additionalactions
14956 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14957 }

```

\PDFForm@Submit

```

14958 \def\PDFForm@Submit{%
14959 /Subtype/Widget%
14960 \Fld@annotflags
14961 \Fld@pageobjref
14962 \Fld@annotnames

```

```

14963 /FT/Btn%
14964 \Fld@flags
14965 /H/P%
14966 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14967 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14968 \ifx\Fld@bordercolor\relax\else 1\fi
14969 \space
14970 \else
14971 /MK<<%
14972 \ifnum\Fld@rotation=\z@
14973 \else
14974 /R \Fld@rotation
14975 \fi
14976 \ifx\Fld@bordercolor\relax
14977 \else
14978 /BC[\Fld@bordercolor]%
14979 \fi
14980 >>%
14981 \fi
14982 /A<<%
14983 /S/SubmitForm%
14984 /F<<%
14985 /FS/URL%
14986 /F(\Hy@escapestring{\Form@action})%
14987 >>%
14988 \Fld@submitflags
14989 >>%
14990 \Fld@additionalactions
14991 }

```

\PDFForm@Reset

```

14992 \ifHy@pdfa
14993 \else
14994 \def\PDFForm@Reset{%
14995 /Subtype/Widget%
14996 \Fld@annotflags
14997 \Fld@pageobjref
14998 \Fld@annotnames
14999 /FT/Btn%
15000 \Fld@flags
15001 /H/P%
15002 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
15003 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
15004 \ifx\Fld@bordercolor\relax\else 1\fi
15005 \space
15006 \else
15007 /MK<<%
15008 \ifnum\Fld@rotation=\z@
15009 \else
15010 /R \Fld@rotation
15011 \fi
15012 \ifx\Fld@bordercolor\relax
15013 \else
15014 /BC[\Fld@bordercolor]%
15015 \fi
15016 % /CA (Clear)
15017 % /AC (Done)
15018 >>%

```

```

15019 \fi
15020 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15021 /A<</S/ResetForm>>%
15022 \Fld@additionalactions
15023 }%
15024 \fi

15025 </pdfform>
15026 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in L^AT_EX macros.

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

```

15027 \def\phantomsection{%
15028 \Hy@MakeCurrentHrefAuto{section*}%
15029 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15030 }
15031 </package>

```

49.1 Bookmarks

```
15032 <*outlines>
```

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

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

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

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

```

15033 \def\Hy@writebookmark#1#2#3#4#5{%
15034 % section number, text, label, level, file
15035 \ifx\WriteBookmarks\relax%
15036 \else
15037 \ifnum#4>\Hy@bookmarksdepth\relax
15038 \else
15039 \@@@writetorep{#1}{#2}{#3}{#4}{#5}%
15040 \fi
15041 \fi

```

```

15042 }
15043 \def\Hy@currentbookmarklevel{0}
15044 \def\Hy@numberline#1{#1 }
15045 \def\@writetorep#1#2#3#4#5{%
15046   \begingroup
15047     \edef\Hy@tempa{#5}%
15048     \ifx\Hy@tempa\Hy@bookmarkstype
15049       \edef\Hy@level{#4}%
15050       \ifx\Hy@levelcheck Y%
15051         \@tempcnta\Hy@level\relax
15052         \advance\@tempcnta by -1 %
15053         \ifnum\Hy@currentbookmarklevel<\@tempcnta
15054           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15055           \advance\@tempcnta by 1 %
15056           \Hy@Warning{%
15057             Difference (\the\@tempcnta) between bookmark levels is %
15058             greater \MessageBreak than one, level fixed%
15059           }%
15060           \@tempcnta\Hy@currentbookmarklevel
15061           \advance\@tempcnta by 1 %
15062           \edef\Hy@level{\the\@tempcnta}%
15063         \fi
15064       \else
15065         \global\let\Hy@levelcheck Y%
15066       \fi
15067       \global\let\Hy@currentbookmarklevel\Hy@level
15068       \@tempcnta\Hy@level\relax
15069       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15070       \advance\@tempcnta by -1 %
15071       \edef\Hy@tempa{#3}%
15072       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15073       \ifx\Hy@tempa\Hy@tempb
15074         \Hy@Warning{%
15075           The anchor of a bookmark and its parent's must not%
15076           \MessageBreak be the same. Added a new anchor%
15077         }%
15078         \phantomsection
15079       \fi
15080       \ifHy@bookmarksnumbered
15081         \let\numberline\Hy@numberline
15082         \let\booknumberline\Hy@numberline
15083         \let\partnumberline\Hy@numberline
15084         \let\chapternumberline\Hy@numberline
15085       \else
15086         \let\numberline\@gobble
15087         \let\booknumberline\@gobble
15088         \let\partnumberline\@gobble
15089         \let\chapternumberline\@gobble
15090       \fi
15091       \HyPsd@XeTeXBigCharstrue
15092       \pdfstringdef\Hy@tempa{#2}%
15093       \HyPsd@SanitizeForOutFile\Hy@tempa
15094       \if@filesw
15095         \stepcounter{bookmark@seq@number}%
15096         \@ifundefined{@outlinefile}{%
15097           }{%
15098             \protected@write\@outlinefile{%

```



```

15099         \protect\BOOKMARK
15100         [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15101         {\Hy@tempa}{\Hy@tempb}%
15102         \@percentchar\space\thebookmark@seq@number
15103     }%
15104 }%
15105 \fi
15106 \fi
15107 \endgroup
15108 }
15109 \newcounter{bookmark@seq@number}

15110 \begingroup
15111 \lccode`=(`{
15112 \lccode`=}`}%
15113 \lccode`1=\z@
15114 \lccode`2=\z@
15115 \lccode`3=\z@
15116 \lccode`5=\z@
15117 \lccode`7=\z@
15118 \lccode`\#=\z@
15119 \lccode``=\z@
15120 \lccode`\{=\z@
15121 \lccode`\}= \z@
15122 \lowercase{%
15123 \endgroup
15124 \def\HyPsd@SanitizeForOutFile#1{%
15125     \@onelevel@sanitize\Hy@tempa
15126     \escapechar`\\%
15127     \edef\Hy@tempa{%
15128         \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
15129     }%
15130     \edef\Hy@tempa{%
15131         \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
15132     }%
15133 }%
15134 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15135     #1%
15136     \ifx\#2\\%
15137         \expandafter\ltx@gobble
15138     \else
15139         \expandafter\ltx@firstofone
15140     \fi
15141     {%
15142         \string\173%
15143         \HyPsd@SanitizeOut@BraceLeft#2\@nil
15144     }%
15145 }%
15146 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15147     #1%
15148     \ifx\#2\\%
15149         \expandafter\ltx@gobble
15150     \else
15151         \expandafter\ltx@firstofone
15152     \fi
15153     {%
15154         \string\175%
15155         \HyPsd@SanitizeOut@BraceRight#2\@nil

```

```

15156 }%
15157 }%
15158 }

```

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

```

15159 \newcommand{\currentpdfbookmark}{%
15160 \pdfbookmark[\Hy@currentbookmarklevel]%
15161 }
15162 \newcommand{\subpdfbookmark}{%
15163 \@tempcnta\Hy@currentbookmarklevel
15164 \Hy@StepCount\@tempcnta
15165 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
15166 }
15167 \newcommand{\belowpdfbookmark}[2]{%
15168 \@tempcnta\Hy@currentbookmarklevel
15169 \Hy@StepCount\@tempcnta
15170 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15171 \advance\@tempcnta by -1 %
15172 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15173 }

```

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.

```

15174 \renewcommand\pdfbookmark[3][0]{%
15175 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
15176 \hyper@anchorstart{#3.#1}\hyper@anchorend
15177 }
15178 \def\BOOKMARK{%
15179 \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
15180 }
15181 \def\@BOOKMARK[#1]{%
15182 \@ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
15183 }

```

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`

```

15184 \RequirePackage{rerunfilecheck}[2009/12/10]
15185 \def\Hy@OutlineRerunCheck{%
15186 \RerunFileCheck{\jobname.out}{%
15187 \immediate\closeout\@outlinefile
15188 }{%
15189 Rerun to get outlines right\MessageBreak
15190 or use package `bookmark'%
15191 }%
15192 }

```

49.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

15193 \*vtex>
15194 \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.

```

15195 \begingroup
15196 \catcode\`=12 %
15197 \ifnum\Hy@VTeXversion<650 %
15198 \catcode\`=12 %
15199 \gdef\hv@pdf@char#1#2#3{%
15200 \char
15201 \ifcase'#1#2#3 %
15202 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15203 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15204 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
15205 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15206 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15207 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15208 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15209 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15210 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15211 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15212 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15213 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15214 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15215 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15216 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15217 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15218 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15219 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15220 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15221 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15222 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15223 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15224 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15225 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15226 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15227 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15228 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15229 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15230 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15231 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15232 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15233 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15234 \fi
15235 }%
15236 \else
15237 \gdef\hv@pdf@char{\char'}%
15238 \fi
15239 \endgroup

```

\@@BOOKMARK

```

15240 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15241 \expandafter\edef\csname @count@#3\endcsname{%
15242 \the\@serial@counter
15243 }%

```

```

15244 \edef\@mycount{\the\@serial@counter}%
15245 \Hy@StepCount\@serial@counter
15246 \edef\@parcount{%
15247   \expandafter\ifx\csname @count@#5\endcsname\relax
15248     0%
15249   \else
15250     \csname @count@#5\endcsname
15251   \fi
15252 }%
15253 \immediate\special{%
15254   !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15255   s=\ifx#2-c\else o\fi,t=#4%
15256 }%
15257 }%

```

\ReadBookmarks

```

15258 \def\ReadBookmarks{%
15259   \begingroup
15260   \def\0{\hv@pdf@char 0}%
15261   \def\1{\hv@pdf@char 1}%
15262   \def\2{\hv@pdf@char 2}%
15263   \def\3{\hv@pdf@char 3}%
15264   \def\({}%
15265   \def\)}%
15266   \def\do##1{%
15267     \ifnum\catcode`##1=\active
15268       \@makeother##1%
15269     \else
15270       \ifnum\catcode`##1=6 %
15271         \@makeother##1%
15272       \fi
15273     \fi
15274   }%
15275   \dospecials
15276   \Hy@safe@activetrue
15277   \InputIfFileExists{\jobname.out}{\}{}%
15278 \endgroup
15279 \ifx\WriteBookmarks\relax
15280 \else
15281   \if@filesw
15282     \newwrite\@outlinefile
15283     \Hy@OutlineRerunCheck
15284     \immediate\openout\@outlinefile=\jobname.out\relax
15285     \ifHy@typexml
15286       \immediate\write\@outlinefile{<relaxxml>\relax}%
15287     \fi
15288   \fi
15289 \fi
15290 }

15291 </vtex>
15292 <!*vtex>
15293 \def\ReadBookmarks{%
15294   \pdf@ifdraftmode{\}{%
15295     \begingroup
15296     \def\do##1{%
15297       \ifnum\catcode`##1=\active

```

```

15298      \@makeother##1%
15299      \else
15300      \ifnum\catcode`##1=6 %
15301      \@makeother##1%
15302      \fi
15303      \fi
15304    }%
15305    \dospecials
15306    \Hy@safe@activetrue
15307    \escapechar=`\%
15308    \def\@@BOOKMARK[##1][##2]##3##4##5{%
15309      \calc@bm@number{##5}%
15310    }%
15311    \InputIfFileExists{\jobname.out}{-}{-}%
15312    \ifx\WriteBookmarks\relax
15313      \global\let\WriteBookmarks\relax
15314    \fi
15315    \def\@@BOOKMARK[##1][##2]##3##4##5{%
15316      \def\Hy@temp{##4}%
15317    (*pdfTeX)
15318      \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15319      \Hy@OutlineName{}\Hy@pstringName{%
15320        ##2\check@bm@number{##3}%
15321      }{%
15322        \expandafter\strip@prefix\meaning\Hy@temp
15323      }%
15324    \}

```

```

15355     \def\WriteBookmarks{0}%
15356     \InputIfFileExists{\jobname.out}{\relax}%
15357     \endgroup
15358     %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}}%
15359     \endgroup
15360 }%
15361 \ifx\WriteBookmarks\relax
15362 \else
15363     \if@files
15364         \newwrite\@outlinefile
15365         \Hy@OutlineRerunCheck
15366         \immediate\openout\@outlinefile=\jobname.out\relax
15367         \ifHy@typexml
15368             \immediate\write\@outlinefile{<relaxxml>\relax}%
15369         \fi
15370     \fi
15371 \fi
15372 }
15373 <*pdfTeX>
15374 \def\Hy@OutlineName#1#2#3#4{%
15375     \pdfoutline goto name{#2}count#3{#4}%
15376 }
15377 </pdfTeX>
15378 \def\check@bm@number#1{%
15379     \expandafter\ifx\csname B_#1\endcsname\relax
15380         0%
15381     \else
15382         \csname B_#1\endcsname
15383     \fi
15384 }
15385 \def\calc@bm@number#1{%
15386     \@tempcnta=\check@bm@number{#1}\relax
15387     \advance\@tempcnta by 1 %
15388     \expandafter\xdef\csname B_#1\endcsname{the\@tempcnta}%
15389 }
15390 </!vTeX>

15391 \ifHy@implicit
15392 \else
15393     \expandafter\endinput
15394 \fi

15395 </outlines>
15396 <*outlines | hypertex>

15397 \newlength\Hy@SectionHShift
15398 \def\Hy@SectionAnchorHref#1{%
15399     \ifx\protect\@typeset@protect
15400         \Hy@@@SectionAnchor{#1}%
15401     \fi
15402 }
15403 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
15404     \leavevmode
15405     \hbox to 0pt{%
15406         \kern-\Hy@SectionHShift
15407         \Hy@raisedlink{%
15408             \hyper@anchorstart{#1}\hyper@anchorend
15409         }%
15410         \hss

```

```

15411 }%
15412 }
15413 \let\H@old@ssect\@ssect
15414 \def\@ssect#1#2#3#4#5{%
15415 \Hy@MakeCurrentHrefAuto{section*}%
15416 \setlength{\Hy@SectionHShift}{#1}%
15417 \begingroup
15418 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15419 \toks\tw@\expandafter{%
15420 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15421 #5%
15422 }%
15423 \edef\x{\endgroup
15424 \the\toks@{\the\toks\tw@}}%
15425 }\x
15426 }
15427 \let\H@old@schapter\@schapter
15428 \def\@schapter#1{%
15429 \begingroup
15430 \let\@mkboth\@gobbletwo
15431 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15432 \Hy@raisedlink{%
15433 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15434 }%
15435 \endgroup
15436 \H@old@schapter{#1}%
15437 }

```

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:

```

15438 \ltx@ifundefined{@chapter}{}{%
15439 \let\Hy@org@chapter\@chapter
15440 \def\@chapter{%
15441 \def\Hy@next{%
15442 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15443 \Hy@raisedlink{%
15444 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15445 }%
15446 }%
15447 \ifnum\c@secnumdepth>\m@ne
15448 \ltx@ifundefined{if@mainmatter}%
15449 \iftrue{\csname if@mainmatter\endcsname}%
15450 \let\Hy@next\relax
15451 \fi
15452 \fi
15453 \Hy@next
15454 \Hy@org@chapter
15455 }%
15456 }
15457 \let\H@old@part\@part
15458 \begingroup\expandafter\expandafter\expandafter\endgroup
15459 \expandafter\ifx\csname chapter\endcsname\relax
15460 \let\Hy@secnum@part\z@
15461 \else
15462 \let\Hy@secnum@part\m@ne
15463 \fi

```

```

15464 \def\@part{%
15465   \ifnum\Hy@secnum@part>\c@secnumdepth
15466     \phantomsection
15467   \fi
15468   \H@old@part
15469 }

15470 \let\H@old@spart\@spart
15471 \def\@spart#1{%
15472   \Hy@MakeCurrentHrefAuto{part*}%
15473   \Hy@raisedlink{%
15474     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15475   }%
15476   \H@old@spart{#1}%
15477 }

15478 \let\H@old@sect\@sect
15479 \def\@sect#1#2#3#4#5#6[#7]#8{%
15480   \ifnum #2>\c@secnumdepth
15481     \expandafter\@firstoftwo
15482   \else
15483     \expandafter\@secondoftwo
15484   \fi
15485   {%
15486     \Hy@MakeCurrentHrefAuto{section*}%
15487     \setlength{\Hy@SectionHShift}{#3}%
15488     \begingroup
15489       \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15490       \toks\tw@\expandafter{%
15491         \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15492         #8%
15493       }%
15494       \edef\x{\endgroup
15495         \the\toks@{\the\toks\tw@}%
15496       }\x
15497     }%
15498     \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15499   }%
15500 }

15501 </outlines | hypertex>
15502 <*outlines>

15503 \expandafter\def\csname Parent-4\endcsname{}
15504 \expandafter\def\csname Parent-3\endcsname{}
15505 \expandafter\def\csname Parent-2\endcsname{}
15506 \expandafter\def\csname Parent-1\endcsname{}
15507 \expandafter\def\csname Parent0\endcsname{}
15508 \expandafter\def\csname Parent1\endcsname{}
15509 \expandafter\def\csname Parent2\endcsname{}
15510 \expandafter\def\csname Parent3\endcsname{}
15511 \expandafter\def\csname Parent4\endcsname{}

15512 </outlines>

```

50 Compatibility with koma-script classes

```
15513 <*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.

```

15514 \def\Hy@tempa{%
15515   \def\@addchap[##1]##2{%
15516     \typeout{##2}%
15517     \if@twoside
15518       \@mkboth{##1}{}%
15519     \else
15520       \@mkboth{}{##1}%
15521     \fi
15522     \addtocontents{lof}{\protect\addvspace{10\p@}}%
15523     \addtocontents{lot}{\protect\addvspace{10\p@}}%
15524     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15525     \Hy@raisedlink{%
15526       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15527     }%
15528     \if@twocolumn
15529       \@topnewpage[\@makeschapterhead{##2}]%
15530     \else
15531       \@makeschapterhead{##2}%
15532       \@afterheading
15533     \fi
15534     \addcontentsline{toc}{chapter}{##1}%
15535   }%
15536 }
15537 \@ifclassloaded{scrbook}{%
15538   \@ifclasslater{scrbook}{2001/01/01}{%
15539     \let\Hy@tempa\@empty
15540   }{}%
15541 }{%
15542   \@ifclassloaded{scrreprt}{%
15543     \@ifclasslater{scrreprt}{2001/01/01}{%
15544       \let\Hy@tempa\@empty
15545     }{}%
15546   }{%
15547     \let\Hy@tempa\@empty
15548   }%
15549 }%
15550 \Hy@tempa
15551 </outlines | hypertex>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15552 <*pd1enc>
15553 \DeclareFontEncoding{PD1}{}{}

Accents
15554 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
15555 \DeclareTextAccent{\'}{PD1}{\textacute}
15556 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
15557 \DeclareTextAccent{\~}{PD1}{\texttilde}
15558 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}

```

```

15559 \DeclareTextAccent{\r}{PD1}{\textring}
15560 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
15561 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
15562 \DeclareTextAccent{\c}{PD1}{\textcedilla}
15563 \DeclareTextAccent{\=} {PD1}{\textasciimacron}
15564 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
15565 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
15566 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
15567 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
15568 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
15569 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
15570 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
15571 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
15572 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
15573 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
15574 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
15575 \DeclareTextCompositeCommand{\=} {PD1}{\@empty}{\textasciimacron}
15576 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15577 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15578 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
15579 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
15580 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
15581 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15582 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15583 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15584 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15585 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15586 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15587 \DeclareTextCompositeCommand{\=} {PD1}{\ }{\textasciimacron}
15588 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15589 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15590 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15591 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15592 \DeclareTextCommand{\newtie}{PD1}[1]{%
15593   \TextSymbolUnavailable{\newtie{#1}}#1%
15594 }

```

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

```

15595 % U+0009 (CHARACTER TABULATION)
15596 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15597 % U+000A (LINE FEED)
15598 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15599 % U+000D (CARRIAGE RETURN)
15600 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15601 % U+02D8 BREVE; breve
15602 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15603 % U+02C7 CARON; caron
15604 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15605 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15606 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15607 % U+02D9 DOT ABOVE; dotaccent
15608 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15609 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15610 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15611 % U+02DB OGONEK; ogonek
15612 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB

```

15613 % U+02DA RING ABOVE; ring
 15614 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 15615 % U+02DC SMALL TILDE; ilde, *tilde
 15616 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 15617 % U+0022 QUOTATION MARK; quotedbl
 15618 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
 15619 % U+0023 NUMBER SIGN; numbersign
 15620 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 15621 % U+0024 DOLLAR SIGN; dollar
 15622 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 15623 % U+0025 PERCENT SIGN; percent
 15624 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 15625 % U+0026 AMPERSAND; ampersand
 15626 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 15627 % U+0028 LEFT PARENTHESIS; parenleft
 15628 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 15629 % U+0029 RIGHT PARENTHESIS; parenright
 15630 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 15631 % U+002E FULL STOP; period
 15632 \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
 15633 % U+003C LESS-THAN SIGN; less
 15634 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 15635 % U+003E GREATER-THAN SIGN; greater
 15636 \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
 15637 % U+005C REVERSE SOLIDUS; backslash
 15638 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15639 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15640 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15641 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15642 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15643 % U+005F LOW LINE; underscore

15644 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
15645 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
15646 % U+0060 GRAVE ACCENT; grave
15647 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
15648 % U+0069 LATIN SMALL LETTER I; i
15649 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
15650 % U+007B LEFT CURLY BRACKET; braceleft
15651 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
15652 % U+007C VERTICAL LINE; *bar, verticalbar
15653 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
15654 % U+007D RIGHT CURLY BRACKET; braceright
15655 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
15656 % U+007E TILDE; asciitilde
15657 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
15658 % U+2022 BULLET; bullet
15659 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
15660 % U+2020 DAGGER; dagger
15661 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
15662 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
15663 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
15664 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
15665 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
15666 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
15667 % U+2014 EM DASH; emdash
15668 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
15669 % U+2013 EN DASH; endash
15670 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
15671 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
15672 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
15673 % U+2044 FRACTION SLASH; fraction
15674 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
15675 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
inglleft
15676 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
15677 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
inglright
15678 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
15679 % U+2212 MINUS SIGN; minus
15680 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
15681 % U+2030 PER MILLE SIGN; perthousand
15682 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
15683 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
15684 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
15685 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
15686 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
15687 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
15688 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
15689 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
15690 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018

15691 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15692 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15693 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15694 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15695 % U+2122 TRADE MARK SIGN; trademark
 15696 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15697 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15698 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15699 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15700 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15701 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15702 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15703 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15704 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15705 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15706 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 15707 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15708 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
 15709 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
 15710 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15711 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 15712 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15713 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 15714 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 15715 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 15716 % U+0153 LATIN SMALL LIGATURE OE; oe
 15717 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 15718 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15719 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 15720 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15721 \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.
 15722 % U+20AC EURO SIGN; *Euro, euro
 15723 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 15724 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 15725 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 15726 % U+00A2 CENT SIGN; cent
 15727 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 15728 % U+00A3 POUND SIGN; sterling
 15729 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 15730 % U+00A4 CURRENCY SIGN; currency
 15731 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 15732 % U+00A5 YEN SIGN; yen
 15733 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 15734 % U+00A6 BROKEN BAR; brokenbar
 15735 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 15736 % U+00A7 SECTION SIGN; section
 15737 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 15738 % U+00A8 DIAERESIS; dieresis
 15739 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 15740 % U+00A9 COPYRIGHT SIGN; copyright
 15741 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 15742 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 15743 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 15744 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft

15745 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
15746 % U+00AC NOT SIGN; logicalnot
15747 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
15748 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
15749 % U+00AE REGISTERED SIGN; registered
15750 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
15751 % U+00AF MACRON; *macron, overscore
15752 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
15753 % U+00B0 DEGREE SIGN; degree
15754 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15755 % U+00B1 PLUS-MINUS SIGN; plusminus
15756 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15757 % U+00B2 SUPERSCRIPT TWO; twosuperior
15758 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15759 % U+00B3 SUPERSCRIPT THREE; threesuperior
15760 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
15761 % U+00B4 ACUTE ACCENT; acute
15762 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
15763 % U+00B5 MICRO SIGN; mu, mul
15764 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
15765 % U+00B6 PILCROW SIGN; paragraph
15766 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
15767 % U+00B7 MIDDLE DOT; middot, *periodcentered
15768 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
15769 % U+00B8 CEDILLA; cedilla
15770 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
15771 % U+00B9 SUPERSCRIPT ONE; onesuperior
15772 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
15773 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
15774 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
15775 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
15776 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
15777 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
15778 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
15779 % U+00BD VULGAR FRACTION ONE HALF; onehalf
15780 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
15781 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
15782 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
15783 % U+00BF INVERTED QUESTION MARK; questiondown
15784 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
15785 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
15786 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
15787 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
15788 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
15789 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
15790 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
15791 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
15792 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
15793 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
15794 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
15795 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
15796 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
15797 % U+00C6 LATIN CAPITAL LETTER AE; AE
15798 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
15799 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla

15800 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
15801 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
15802 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
15803 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
15804 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
15805 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
15806 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
15807 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
15808 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
15809 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
15810 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
15811 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
15812 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
15813 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
15814 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
15815 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
15816 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
15817 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15818 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15819 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15820 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15821 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
15822 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15823 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
15824 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15825 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
15826 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15827 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
15828 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15829 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
15830 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15831 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
15832 % U+00D7 MULTIPLICATION SIGN; multiply
15833 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15834 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15835 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15836 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15837 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
15838 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15839 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
15840 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15841 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
15842 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15843 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
15844 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15845 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
15846 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15847 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15848 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15849 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15850 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15851 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15852 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
15853 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15854 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
15855 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15856 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2

15857 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15858 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
15859 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15860 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
15861 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15862 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15863 % U+00E6 LATIN SMALL LETTER AE; ae
15864 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15865 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15866 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15867 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15868 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
15869 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15870 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
15871 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15872 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
15873 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
15874 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
15875 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
15876 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15877 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
15878 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
15879 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15880 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
15881 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
15882 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15883 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
15884 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15885 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15886 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
15887 % U+00F0 LATIN SMALL LETTER ETH; eth
15888 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
15889 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15890 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
15891 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15892 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
15893 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15894 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
15895 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15896 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
15897 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15898 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
15899 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15900 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
15901 % U+00F7 DIVISION SIGN; divide
15902 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
15903 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15904 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
15905 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15906 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
15907 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15908 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
15909 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15910 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
15911 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15912 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
15913 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute


```

15914 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
15915 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
15916 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
15917 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
15918 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15919 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
15920 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

```

Glyphs that consist of several characters.

```

15921 \DeclareTextCommand{\SS}{PD1}{SS}%
15922 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

```

Aliases (german.sty)

```

15923 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
15924 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
15925 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
15926 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
15927 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%
15928 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15929 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15930 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%

```

Aliases (math names)

```

15931 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15932 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15933 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15934 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15935 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15936 \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).

```

15937 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15938 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15939 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15940 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15941 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15942 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15943 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15944 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15945 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15946 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15947 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15948 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15949 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15950 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

15951 </pd1enc>

```

51.2 PU encoding

```

15952 (*puenc)
15953 \DeclareFontEncoding{PU}{}{}

```

51.2.1 NFSS2 accents

```

15954 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15955 \DeclareTextCommand{\`}{PU}[1]{\#1\83\000}% U+0300
15956 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15957 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
15958 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb

```

15959 \DeclareTextCommand{\~}{PU}[1]{#1\83\002}% U+0302
15960 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15961 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15962 % U+0304 COMBINING MACRON; macroncmb
15963 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15964 % U+0306 COMBINING BREVE; brevecmb
15965 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15966 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15967 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15968 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15969 % U+0308 COMBINING DIAERESIS; dieresiscmb
15970 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15971 % U+030A COMBINING RING ABOVE; ringcmb
15972 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15973 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15974 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15975 % U+030C COMBINING CARON; caroncmb
15976 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15977 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravescmb
15978 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15979 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15980 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15981 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15982 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
15983 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
15984 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15985 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
laut (tipa)
15986 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15987 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15988 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15989 % U+0327 COMBINING CEDILLA; cedillacmb
15990 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15991 % U+0328 COMBINING OGONEK; ogonekcmb
15992 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15993 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15994 % \textsubcircum (tipa)
15995 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15996 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15997 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15998 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15999 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
16000 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
16001 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
16002 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
blecmb
16003 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
16004 % U+20DD COMBINING ENCLOSING CIRCLE
16005 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

Double accents.

16006 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
16007 \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.
16008 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}%
16009 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}%
16010 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%

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16011 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
16012 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
16013 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}%
16014 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
16015 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
16016 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
16017 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
16018 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
16019 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
16020 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
16021 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
16022 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{\ \83\021\}}% U+0311
16023 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{\ \83\044\}}% U+0324
16024 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textringlow}%
16025 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcirc-
low}%
16026 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{\ \83\056\}}% U+032E
16027 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildelow}%
16028 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
16029 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
16030 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
16031 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
16032 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
16033 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16034 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16035 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}%
16036 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}%
16037 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}%
16038 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
16039 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
16040 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
16041 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
16042 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
16043 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
16044 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
16045 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
16046 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
16047 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
16048 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
16049 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
16050 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
16051 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
16052 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcirc-
low}%
16053 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
16054 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
16055 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
16056 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
16057 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
16058 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
16059 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
16060 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16061 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

Accents for capitals (see encoding TS1)
16062 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16063 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16064 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16065 \DeclareTextCommand{\capitalacute}{PU}[1]{\^{#1}}%

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16066 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16067 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16068 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}%
16069 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16070 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16071 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16072 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16073 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16074 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16075 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16076 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

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

Special white space escape characters.

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16077 % U+0009 (CHARACTER TABULATION)
16078 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16079 % U+000A (LINE FEED)
16080 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16081 % U+000D (CARRIAGE RETURN)
16082 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
16083 % U+0022 QUOTATION MARK; quotedbl
16084 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16085 % U+0023 NUMBER SIGN; numbersign
16086 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16087 % U+0024 DOLLAR SIGN; dollar
16088 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16089 %* \textdollar -> \mathdollar
16090 %* \textdollar -> \EyesDollar (marvosym)
16091 % U+0025 PERCENT SIGN; percent
16092 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16093 % U+0026 AMPERSAND; ampersand
16094 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16095 %* \textampersand -> \binampersand (stmaryrd)
16096 %* \textampersand -> \with (cmll)
16097 % U+0027 APOSTROPHE; quotesingle
16098 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16099 % U+0028 LEFT PARENTHESIS; parenleft
16100 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16101 % U+0029 RIGHT PARENTHESIS; parenright
16102 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16103 % U+002A ASTERISK; asterisk; (?)
16104 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16105 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
16106 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16107 % U+002C COMMA; comma; \MVComma (marvosym)
16108 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16109 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16110 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16111 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16112 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16113 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16114 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16115 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16116 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16117 % U+0031 DIGIT ONE; one; \MVOne (marvosym)

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16118 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
16119 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
16120 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
16121 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
16122 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
16123 % U+0034 DIGIT FOUR; four; \MVFour (marvosym)
16124 \DeclareTextCommand{\textMVFfour}{PU}{\80\064}%* U+0034
16125 % U+0035 DIGIT FIVE; five; \MVFive (marvosym)
16126 \DeclareTextCommand{\textMVFfive}{PU}{\80\065}%* U+0035
16127 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
16128 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
16129 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
16130 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
16131 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
16132 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
16133 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
16134 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039
\80\072: U+003A COLON; colon
\80\073: U+003B SEMICOLON; semicolon
16135 % U+003C LESS-THAN SIGN; less
16136 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
\80\075: U+003D EQUALS SIGN; equal
16137 % U+003E GREATER-THAN SIGN; greater
16138 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
\80\077: U+003F QUESTION MARK; question
16139 % U+0040 COMMERCIAL AT; at; \MVAt (marvosym)
16140 \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
16141 % U+005C REVERSE SOLIDUS; backslash
16142 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
\80\135: U+005D RIGHT SQUARE BRACKET; bracketright
16143 % U+005E CIRCUMFLEX ACCENT; asciicircum
16144 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
16145 % U+005F LOW LINE; underscore
16146 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
16147 %* \textunderscore -> \mathunderscore (LaTeX)
16148 % U+0060 GRAVE ACCENT; grave
16149 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
\80\141: U+0061 LATIN SMALL LETTER A; a
...
\80\150: U+0068 LATIN SMALL LETTER H; h
16150 % U+0069 LATIN SMALL LETTER I; i
16151 \DeclareTextCompositeCommand{.}{PU}{i}{i}% \80\151 U+0069
16152 \DeclareTextCompositeCommand{.}{PU}{i}{i}% \80\151 U+0069
\80\152: U+006A LATIN SMALL LETTER J; j
...
\80\172: U+007A LATIN SMALL LETTER Z; z
16153 % U+007B LEFT CURLY BRACKET; braceleft
16154 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B

16155 % U+007C VERTICAL LINE; *bar, verticalbar
 16156 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 16157 %* \textbar -> \textverline (tipa)
 16158 % U+007D RIGHT CURLY BRACKET; braceright
 16159 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 16160 % U+007E TILDE; asciitilde
 16161 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

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

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 16162 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 16163 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 16164 % U+00A2 CENT SIGN; cent
 16165 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 16166 % U+00A3 POUND SIGN; sterling
 16167 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 16168 %* \textsterling -> \mathsterling (LaTeX)
 16169 %* \textsterling -> \pounds (LaTeX)
 16170 % U+00A4 CURRENCY SIGN; currency
 16171 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 16172 % U+00A5 YEN SIGN; yen
 16173 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 16174 % U+00A6 BROKEN BAR; brokenbar
 16175 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 16176 %* \textbrokenbar -> \brokenvert (wasysym)
 16177 % U+00A7 SECTION SIGN; section
 16178 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 16179 %* \textsection -> \mathsection (LaTeX)
 16180 %* \textsection -> \S (LaTeX)
 16181 % U+00A8 DIAERESIS; diaeresis
 16182 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 16183 % U+00A9 COPYRIGHT SIGN; copyright
 16184 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
 16185 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 16186 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 16187 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 16188 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 16189 % U+00AC NOT SIGN; logicalnot
 16190 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 16191 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 16192 % U+00AE REGISTERED SIGN; registered
 16193 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 16194 % U+00AF MACRON; *macron, overscore
 16195 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 16196 % U+00B0 DEGREE SIGN; degree
 16197 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 16198 % U+00B1 PLUS-MINUS SIGN; plusminus
 16199 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 16200 % U+00B2 SUPERSCRIPT TWO; twosuperior
 16201 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
 16202 % U+00B3 SUPERSCRIPT THREE; threesuperior
 16203 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
 16204 % U+00B4 ACUTE ACCENT; acute
 16205 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4

16206 \DeclareTextCommand{\textasciicute}{PU}{\80\264}% U+00B4
 16207 % U+00B5 MICRO SIGN; mu, mul
 16208 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 16209 % U+00B6 PILCROW SIGN; paragraph
 16210 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 16211 %* \textparagraph -> \mathparagraph (LaTeX)
 16212 % U+00B7 MIDDLE DOT; middot, *periodcentered
 16213 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 16214 %* \textperiodcentered -> \MultiplicationDot (marvosym)
 16215 %* \textperiodcentered -> \Squaredot (marvosym)
 16216 % U+00B8 CEDILLA; cedilla
 16217 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 16218 % U+00B9 SUPERSCRIPT ONE; onesuperior
 16219 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
 16220 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 16221 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 16222 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 16223 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 16224 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 16225 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 16226 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 16227 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 16228 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 16229 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 16230 % U+00BF INVERTED QUESTION MARK; questiondown
 16231 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 16232 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 16233 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 16234 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 16235 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 16236 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 16237 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 16238 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 16239 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 16240 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 16241 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
 16242 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 16243 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 16244 % U+00C6 LATIN CAPITAL LETTER AE; AE
 16245 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 16246 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 16247 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
 16248 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 16249 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 16250 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 16251 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 16252 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 16253 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
 16254 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 16255 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
 16256 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 16257 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 16258 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 16259 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 16260 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 16261 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE

16262 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16263 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
16264 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16265 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16266 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16267 \DeclareTextCompositeCommand{~}{PU}{N}{\80\321}% U+00D1
16268 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16269 \DeclareTextCompositeCommand{`}{PU}{O}{\80\322}% U+00D2
16270 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16271 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}% U+00D3
16272 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
16273 \DeclareTextCompositeCommand{^}{PU}{O}{\80\324}% U+00D4
16274 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16275 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}% U+00D5
16276 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16277 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
16278 % U+00D7 MULTIPLICATION SIGN; multiply
16279 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
16280 %* \textmultiply -> \vartimes (stmaryrd)
16281 %* \textmultiply -> \MVMultiplication (marvosym)
16282 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16283 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16284 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16285 \DeclareTextCompositeCommand{`}{PU}{U}{\80\331}% U+00D9
16286 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16287 \DeclareTextCompositeCommand{'}{PU}{U}{\80\332}% U+00DA
16288 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16289 \DeclareTextCompositeCommand{^}{PU}{U}{\80\333}% U+00DB
16290 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16291 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
16292 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16293 \DeclareTextCompositeCommand{'}{PU}{Y}{\80\335}% U+00DD
16294 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16295 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16296 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16297 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16298 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16299 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16300 \DeclareTextCompositeCommand{`}{PU}{a}{\80\340}% U+00E0
16301 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16302 \DeclareTextCompositeCommand{'}{PU}{a}{\80\341}% U+00E1
16303 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16304 \DeclareTextCompositeCommand{^}{PU}{a}{\80\342}% U+00E2
16305 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16306 \DeclareTextCompositeCommand{~}{PU}{a}{\80\343}% U+00E3
16307 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16308 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
16309 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16310 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16311 % U+00E6 LATIN SMALL LETTER AE; ae
16312 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16313 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16314 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16315 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16316 \DeclareTextCompositeCommand{`}{PU}{e}{\80\350}% U+00E8
16317 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16318 \DeclareTextCompositeCommand{'}{PU}{e}{\80\351}% U+00E9

16319 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16320 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
16321 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16322 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16323 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16324 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
16325 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\354}% U+00EC
16326 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16327 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16328 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16329 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16330 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16331 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16332 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16333 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16334 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16335 % U+00F0 LATIN SMALL LETTER ETH; eth
16336 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
16337 %* \dh -> \eth (wsuipa, phonetic)
16338 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
16339 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
16340 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
16341 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
16342 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
16343 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
16344 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
16345 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
16346 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
16347 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
16348 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
16349 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
16350 % U+00F7 DIVISION SIGN; divide
16351 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
16352 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
16353 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
16354 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
16355 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
16356 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
16357 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
16358 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
16359 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
16360 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
16361 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
16362 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
16363 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
16364 % U+00FE LATIN SMALL LETTER THORN; thorn;
16365 % \th, \thorn (wasysym), \textthorn (tipa)
16366 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
16367 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
16368 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
16369 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

16370 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
16371 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
16372 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron

16373 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
16374 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
16375 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
16376 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
16377 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
16378 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
16379 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
16380 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
16381 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
16382 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
16383 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
16384 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
16385 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
16386 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
16387 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
16388 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
16389 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
16390 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-
cent
16391 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16392 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16393 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16394 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16395 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16396 % U+010D LATIN SMALL LETTER C WITH CARON; caron
16397 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16398 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16399 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16400 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16401 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16402 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16403 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
16404 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16405 % \textcrd (tipa)
16406 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16407 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16408 %* \textcrd -> \crossd (wsuipa)
16409 % An alternate glyph with the stroke through the bowl:
16410 %* \textcrd -> \textbard (tipa)
16411 %* \textcrd -> \bard (wsuipa)
16412 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16413 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16414 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16415 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16416 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16417 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16418 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16419 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16420 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16421 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16422 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16423 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16424 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16425 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16426 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16427 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16428 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron

16429 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16430 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16431 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16432 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16433 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16434 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16435 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16436 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16437 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16438 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16439 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16440 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
16441 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16442 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16443 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16444 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent
16445 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16446 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16447 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16448 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16449 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16450 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16451 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16452 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16453 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16454 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16455 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16456 %* \texthbar -> \textcrh (tipa)
16457 %* \texthbar -> \crossh (wsuipa)
16458 %* \texthbar -> \planck (phonetic)
16459 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16460 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16461 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16462 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16463 \DeclareTextCompositeCommand{\~}{PU}{\i}{\81\051}% U+0129
16464 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16465 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16466 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16467 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16468 \DeclareTextCompositeCommand{\=}{PU}{\i}{\81\053}% U+012B
16469 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
16470 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16471 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
16472 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16473 \DeclareTextCompositeCommand{\u}{PU}{\i}{\81\055}% U+012D
16474 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16475 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16476 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16477 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16478 \DeclareTextCompositeCommand{\k}{PU}{\i}{\81\057}% U+012F
16479 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16480 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16481 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16482 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16483 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ

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16484 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16485 % U+0133 LATIN SMALL LIGATURE IJ; ij
16486 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16487 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16488 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16489 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16490 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16491 \DeclareTextCompositeCommand{\^}{PU}{\j}{\81\065}% U+0135
16492 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16493 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16494 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16495 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

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

```

16496 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16497 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
16498 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
16499 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
16500 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
16501 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
16502 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
16503 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
16504 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
16505 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
16506 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
16507 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
16508 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
16509 \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`.

```

16510 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
cent
16511 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
16512 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
16513 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
16514 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
16515 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
16516 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
16517 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
16518 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
16519 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
16520 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
16521 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
16522 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent
16523 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
16524 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
16525 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
16526 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
16527 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
16528 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
16529 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148

```

16530 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 16531 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16532 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16533 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16534 % U+014B LATIN SMALL LETTER ENG; eng
 16535 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16536 %* \ng -> \eng (wsuipa)
 16537 %* \ng -> \engma (phonetic)
 16538 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16539 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16540 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16541 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16542 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16543 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16544 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16545 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16546 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 16547 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 16548 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 16549 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 16550 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 16551 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 16552 % U+0153 LATIN SMALL LIGATURE OE; oe
 16553 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 16554 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 16555 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 16556 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 16557 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 16558 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 16559 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 16560 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 16561 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 16562 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 16563 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 16564 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 16565 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 16566 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 16567 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 16568 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 16569 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 16570 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 16571 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 16572 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 16573 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 16574 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 16575 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 16576 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 16577 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 16578 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 16579 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 16580 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 16581 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 16582 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac-

cent

16583 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16584 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16585 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16586 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16587 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16588 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16589 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16590 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16591 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16592 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16593 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16594 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16595 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16596 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16597 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16598 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16599 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16600 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
16601 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
16602 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
16603 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
16604 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
16605 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
16606 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
16607 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
16608 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
16609 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
16610 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udbla-
cute, Uhungarumlaut
16611 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
16612 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udbla-
cute, uhungarumlaut
16613 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
16614 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
16615 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
16616 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
16617 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
16618 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
16619 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
16620 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
16621 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
16622 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
16623 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
16624 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
16625 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
16626 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
16627 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
16628 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
16629 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
16630 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
16631 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
16632 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
16633 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
16634 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
16635 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
16636 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron

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16637 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
16638 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
16639 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
16640 % U+017F LATIN SMALL LETTER LONG S; longs, slong
16641 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

16642 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
16643 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
16644 %* \textcrb -> \crossb (wsuipa)
16645 % An alternate glyph with the stroke through the bowl:
16646 %* \textcrb -> \textbarb (tipa)
16647 %* \textcrb -> \barb (wsuipa)
16648 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (pho-
      netic)
16649 \DeclareTextCommand{\texthausab}{PU}{\81\201}%* U+0181
16650 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
16651 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
16652 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-
      netic)
16653 \DeclareTextCommand{\texthausad}{PU}{\81\212}%* U+018A
16654 % U+018E LATIN CAPITAL LETTER REVERSED E; Eversed
16655 \DeclareTextCommand{\textEversed}{PU}{\81\216}% U+018E
16656 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16657 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16658 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16659 %* \textflorin -> \Florin (marvosym)
16660 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16661 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16662 %* \texthvlig -> \hv (wsuipa)
16663 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (pho-
      netic)
16664 \DeclareTextCommand{\texthausak}{PU}{\81\230}%* U+0198
16665 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16666 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16667 %* \texthtk -> \hausak (phonetic)
16668 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16669 % \textbarl (tipa), \barl (wsuipa)
16670 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16671 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16672 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16673 % \textcrlambda (tipa)
16674 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
16675 %* \textcrlambda -> \crossnilambda (wsuipa)
16676 %* \textcrlambda -> \barlambda (phonetic)
16677 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
16678 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
16679 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
      long;
16680 % \textnrleg (tipx)
16681 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16682 %* \textPUnrleg -> \textnrleg (tipx)
16683 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16684 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16685 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16686 % \textlhookt (tipa)
16687 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB

```

16688 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
 16689 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
 16690 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
 16691 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
 16692 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
 16693 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
 16694 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
 16695 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
 16696 % glottalinvertedstroke; \textcrinvglotstop (tipa)
 16697 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
 16698 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
 16699 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
 16700 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
 tal;
 16701 % \textpipe (tipa)
 16702 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
 16703 %* \textpipe -> \textpipevar (tipx)
 16704 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
 16705 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)
 16706 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
 16707 %* \textdoublepipe -> \textdoublepipevar (tipx)
 16708 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOU-
 BLE BAR;
 16709 % clickalveolar; \textdoublebarpipe (tipa)
 16710 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
 16711 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
 16712 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 16713 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 16714 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 16715 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 16716 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 16717 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 16718 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 16719 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16720 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 16721 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 16722 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 16723 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 16724 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 16725 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 16726 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 16727 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 16728 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 16729 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
 16730 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
 16731 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 16732 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 16733 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 16734 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 16735 %* \textgslash -> \textcrg (tipa)
 16736 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 16737 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 16738 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 16739 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 16740 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 16741 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 16742 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron

16743 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16744 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16745 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16746 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16747 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16748 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16749 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16750 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16751 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16752 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16753 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16754 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16755 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16756 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16757 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16758 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16759 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16760 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16761 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
16762 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16763 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16764 % *Oslashacute, Ostrokeacut
16765 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
16766 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16767 % *oslashacute, ostrokeacut
16768 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16769 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16770 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16771 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16772 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16773 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16774 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16775 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16776 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16777 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
16778 % edbreve
16778 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16779 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
16780 % breve
16780 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16781 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16782 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16783 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16784 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16785 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16786 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
16787 % breve
16787 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16788 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
16789 % breve
16789 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16790 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16791 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16792 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16793 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16794 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16795 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-

edbreve
 16796 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
 16797 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
 breve
 16798 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
 16799 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 16800 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 16801 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 16802 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 16803 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 16804 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 16805 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 16806 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 16807 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
 edbreve
 16808 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
 16809 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
 breve
 16810 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217
 16811 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16812 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16813 % U+021F LATIN SMALL LETTER H WITH CARON
 16814 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16815 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16816 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16817 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16818 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16819 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16820 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16821 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16822 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16823 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16824 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16825 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16826 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16827 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16828 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16829 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16830 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16831 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16832 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16833 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16834 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16835 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16836 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16837 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16838 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16839 % U+0237 LATIN SMALL LETTER DOTLESS J
 16840 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16841 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16842 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16843 %* \textPUdblig -> \textdblig (tipx)
 16844 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16845 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16846 %* \textPUqplig -> \textqplig (tipx)
 16847 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16848 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C

16849 %* \textslashc -> \textcentoldstyle (textcomp)
 16850 % With bar instead of stroke:
 16851 %* \textslashc -> \textbarc (tipa)

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

16852 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16853 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16854 %* \textturna -> \inva (wasysym)
 16855 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16856 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16857 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16858 %* \textscripta -> \vara (phonetic)
 16859 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16860 % \textturnscripta (tipa)
 16861 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16862 %* \textturnscripta -> \invscripta (wsuipa)
 16863 %* \textturnscripta -> \rotvara (phonetic)
 16864 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16865 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253
 16866 %* \texthtb -> \hookb (wsuipa)
 16867 %* \texthtb -> \hausab (phonetic)
 16868 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16869 % \textopeno (tipa), \openo (wasysym)
 16870 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16871 %* \textopeno -> \varopeno (phonetic)
 16872 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16873 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16874 %* \textctc -> \curlyc (wsuipa)
 16875 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16876 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16877 %* \textrtaild -> \taild (wsuipa)
 16878 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16879 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16880 %* \texthtd -> \hookd (wsuipa)
 16881 %* \texthtd -> \hausad (phonetic)
 16882 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16883 % \textreve (tipa), \reve (wsuipa)
 16884 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16885 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16886 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16887 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16888 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16889 % \textrhookswa (tipa)
 16890 \DeclareTextCommand{\textrhookswa}{PU}{\82\132}% U+025A
 16891 %* \textrhookswa -> \er (wsuipa)
 16892 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 % SILON; eopen;
 16893 % \niepsilon (wsuipa)
 16894 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16895 %* \textniepsilon -> \epsi (phonetic)
 16896 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16897 % \textrevepsilon (tipa), \revepsilon (wsuipa)
 16898 \DeclareTextCommand{\textrevepsilon}{PU}{\82\134}%* U+025C
 16899 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 % reversedhook;
 16900 % \textrhookrevepsilon (tipa)
 16901 \DeclareTextCommand{\textrhookrevepsilon}{PU}{\82\135}%* U+025D

16902 %* \textrhookrevepsilon -> \hookrevepsilon (wsuipa)
 16903 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16904 % \textcloserevepsilon (tipa)
 16905 \DeclareTextCommand{\textcloserevepsilon}{PU}{\82\136}% U+025E
 16906 %* \textcloserevepsilon -> \closedrevepsilon (wsuipa)
 16907 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16908 % \textbardotlessj (tipa)
 16909 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16910 %* \textbardotlessj -> \barj (phonetic)
 16911 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16912 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16913 %* \texthtg -> \hookg (wsuipa)
 16914 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16915 % \textscriptg (tipa), \scriptg (wsuipa)
 16916 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16917 %* \textscriptg -> \varg (phonetic)
 16918 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)
 16919 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
 16920 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinsmall;
 16921 % \ipagamma (wsuipa), \vod (phonetic)
 16922 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
 16923 %* \textipagamma -> \vod (pnonetic)
 16924 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
 16925 % \babygamma (wsuipa)
 16926 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
 16927 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
 16928 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
 16929 %* \textturnh -> \invh (wsuipa)
 16930 %* \textturnh -> \udesc (phonetic)
 16931 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
 16932 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
 16933 %* \texthth -> \hookh (wsuipa)
 16934 %* \texthth -> \voicedh (phonetic)
 16935 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
 ththeng (tipa)
 16936 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
 16937 %* \texththeng -> \hookheng (wsuipa)
 16938 % U+0268 LATIN SMALL LETTER I WITH STROKE;
 16939 % \textbari (tipa), \bari (wsuipa)
 16940 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
 16941 %* \textbari -> \ibar (phonetic)
 16942 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \niiota (wsuipa)
 16943 \DeclareTextCommand{\textniiota}{PU}{\82\151}%* U+0269
 16944 %* \textniiota -> \vari (phonetic)
 16945 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
 16946 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
 16947 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
 16948 % \textltilde (tipa)
 16949 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
 16950 %* \textltilde -> \tildel (wsuipa)
 16951 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
 16952 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
 16953 %* \textbeltl -> \latfrc (wsuipa)
 16954 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
 16955 % \lhookretroflex; \textrtail (tipa)

16956 \DeclareTextCommand{\textrtail}{PU}{\82\155}% U+026D
16957 %* \textrtail -> \tail (wsuipa)
16958 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16959 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16960 %* \textlyoghlig -> \lz (wsuipa)
16961 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16962 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16963 %* \textturnm -> \invm (wsuipa)
16964 %* \textturnm -> \rotm (phonetic)
16965 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16966 % \textturnmrleg (tipa)
16967 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16968 %* \textturnmrleg -> \legm (wsuipa)
16969 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16970 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16971 %* \textltailm -> \labdentalnas (wsuipa)
16972 %* \textltailm -> \emgma (phonetic)
16973 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-
tailn (tipa)
16974 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16975 %* \textltailn -> \nj (wsuipa)
16976 %* \textltailn -> \nya (phonetic)
16977 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16978 % nhookretroflex; \textrtailn (tipa)
16979 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16980 %* \textrtailn -> \tailn (wsuipa)
16981 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16982 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16983 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16984 % LATIN CAPITAL LETTER BARRED O; obarred;
16985 % \textbaro (tipa), \baro (wsuipa)
16986 % But \baro from stmaryrd is different!
16987 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16988 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscœlig (tipa)
16989 \DeclareTextCommand{\textscœlig}{PU}{\82\166}% U+0276
16990 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16991 % \textcloseomega (tipa)
16992 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16993 %* \textcloseomega -> \closedniomega (wsuipa)
16994 %* \textcloseomega -> \varomega (phonetic)
16995 % U+0278 LATIN SMALL LETTER PHI; philatin; \nipher (wsuipa)
16996 \DeclareTextCommand{\textnipher}{PU}{\82\170}%* U+0278
16997 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16998 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16999 %* \textturnr -> \invr (wsuipa)
17000 %* \textturnr -> \rotr (phonetic)
17001 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
17002 % rlonglegturned; \textturnlongleg (tipa)
17003 \DeclareTextCommand{\textturnlongleg}{PU}{\82\172}% U+027A
17004 %* \textturnlongleg -> \invleg (wsuipa)
17005 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhohturned;
17006 % \textturnrrtail (tipa)
17007 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
17008 %* \textturnrrtail -> \tailinvr (wsuipa)
17009 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlon-
glegr (tipa)

17010 \DeclareTextCommand{\textlonglegr}{PU}{\82\174}%* U+027C
17011 %* \textlonglegr -> \legr (wsuipa)
17012 % U+027D LATIN SMALL LETTER R WITH TAIL; rhoon; \textrtailr (tipa)
17013 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
17014 %* \textrtailr -> \tailr (wsuipa)
17015 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
17016 % \textfishhookr (tipa)
17017 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
17018 %* \textfishhookr -> \flapr (wsuipa)
17019 %* \textfishhookr -> \flap (phonetic)
17020 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
17021 % \textlhtlongi (tipa)
17022 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17023 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17024 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17025 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17026 % \textinvscr (tipa), \invscr (wsuipa)
17027 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281
17028 % U+0282 LATIN SMALL LETTER S WITH HOOK; shoon; \textrtails (tipa)
17029 \DeclareTextCommand{\textrtails}{PU}{\82\202}% U+0282
17030 %* \textrtails -> \tails (wsuipa)
17031 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17032 \DeclareTextCommand{\textesh}{PU}{\82\203}%* U+0283
17033 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17034 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17035 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17036 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatreversed;
17037 % \textvibyi (tipa)
17038 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17039 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17040 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17041 %* \textctesh -> \curlyesh (wsuipa)
17042 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17043 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17044 %* \textturnt -> \clickt (wsuipa)
17045 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflexhook;
17046 % \textrtailt (tipa)
17047 \DeclareTextCommand{\textrtailt}{PU}{\82\210}% U+0288
17048 %* \textrtailt -> \tailt (wsuipa)
17049 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17050 % \textbaru (tipa), \baru (wsuipa)
17051 \DeclareTextCommand{\textbaru}{PU}{\82\211}%* U+0289
17052 %* \textbaru -> \ubar (phonetic)
17053 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17054 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}%* U+028A
17055 %* \textniupsilon -> \rotOmega (phonetic)
17056 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LETTER SCRIPT V;
17057 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17058 \DeclareTextCommand{\textscriptv}{PU}{\82\213}%* U+028B
17059 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17060 \DeclareTextCommand{\textturnv}{PU}{\82\214}%* U+028C
17061 %* \textturnv -> \invv (wsuipa)
17062 %* \textturnv -> \pwedge (phonetic)

17063 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
17064 \DeclareTextCommand{\textturnw}{PU}{\82\215}%* U+028D
17065 %* \textturnw -> \invw (wsuipa)
17066 %* \textturnw -> \rotw (phonetic)
17067 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
17068 \DeclareTextCommand{\textturny}{PU}{\82\216}%* U+028E
17069 %* \textturny -> \invy (wsuipa)
17070 %* \textturny -> \roty (phonetic)
17071 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17072 \DeclareTextCommand{\textscy}{PU}{\82\217}%* U+028F
17073 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-hook;
17074 % \textrtailz (tipa)
17075 \DeclareTextCommand{\textrtailz}{PU}{\82\220}% U+0290
17076 %* \textrtailz -> \tailz (wsuipa)
17077 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
17078 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17079 %* \textctz -> \curlyz (wsuipa)
17080 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;
17081 % \textyogh (tipa), \yogh (wsuipa)
17082 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17083 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
17084 % ezhcurl; \textctyogh (tipa)
17085 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17086 %* \textctyogh -> \curlyyogh (wsuipa)
17087 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
17088 % \textglotstop (tipa), \glotstop (wsuipa)
17089 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
17090 %* \textglotstop -> \ejective (wsuipa)
17091 %* \textglotstop -> \glottal (phonetic)
17092 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17093 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
17094 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17095 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
17096 %* \textrevglotstop -> \reject (wsuipa)
17097 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
17098 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17099 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
17100 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
17101 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17102 %* \textstretchc -> \clickc (wsuipa)
17103 %* \textstretchc -> \textstretchcvar (tipx)
17104 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
17105 % \textbullseye (tipa)
17106 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17107 %* \textbullseye -> \clickb (wsuipa)
17108 %* \textbullseye -> \textObullseye (tipx)
17109 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17110 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17111 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17112 % \textcloseepsilon (tipa)
17113 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
17114 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17115 % \texthtscg (tipa)
17116 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17117 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)

17118 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
 17119 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcros-
 tail; \textcdj (tipa)
 17120 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
 17121 %* \textctj -> \textctjvar (tipx)
 17122 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
 17123 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
 17124 %* \textturnk -> \textturnsck (tipx)
 17125 % U+029F LATIN LETTER SMALL CAPITAL L; \textscL (tipa)
 17126 \DeclareTextCommand{\textscL}{PU}{\82\237}% U+029F
 17127 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
 17128 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
 17129 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstop-
 stroke;
 17130 % \textbarglotstop (tipa)
 17131 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
 17132 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
 17133 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokere-
 versed;
 17134 % \textbarrevglotstop (tipa)
 17135 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 17136 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 17137 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 17138 %* \textdzlig -> \dz (wsupipa)
 17139 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyogh-
 lig (tipa)
 17140 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 17141 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 17142 % \textdctzlig (tipa)
 17143 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 17144 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 17145 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 17146 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \texttshlig (tipa)
 17147 \DeclareTextCommand{\texttshlig}{PU}{\82\247}% U+02A7
 17148 %* \texttshlig -> \tesh (wsuipa)
 17149 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 17150 % \texttctclig (tipa)
 17151 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 17152 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 17153 % \textlhtlongy (tipa)
 17154 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 17155 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 17156 % \textvibyy (tipa)
 17157 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

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

17158 % U+02BD MODIFIER LETTER REVERSED COMMA;
 17159 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 17160 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 17161 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 17162 % \textraiseglotstop (tipa)
 17163 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 17164 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 17165 % \textlptr (tipa)
 17166 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 17167 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 17168 % \textrptr (tipa)

17169 \DeclareTextCommand{\texttrptr}{PU}{\82\303}% U+02C3
 17170 % U+02C7 CARON; caron
 17171 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 17172 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 17173 % \textprimstress (tipa)
 17174 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 17175 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 17176 % \textsecstress (tipa)
 17177 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 17178 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 17179 % \textlengthmark (tipa)
 17180 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17181 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 17182 % \texthalflength (tipa)
 17183 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17184 % U+02D8 BREVE; breve
 17185 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17186 % U+02D9 DOT ABOVE; dotaccent
 17187 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17188 % U+02DA RING ABOVE; ring
 17189 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17190 % U+02DB OGONEK; ogonek
 17191 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17192 % U+02DC SMALL TILDE; ilde, *tilde
 17193 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17194 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17195 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17196 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17197 % U+02F3 MODIFIER LETTER LOW RING
 17198 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17199 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17200 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17201 % U+02F7 MODIFIER LETTER LOW TILDE
 17202 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 17203 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17204 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17205 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17206 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

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

17207 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravemod
 17208 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17209 % U+0311 COMBINING INVERTED BREVE; breveinvertedmod
 17210 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17211 % U+0323 COMBINING DOT BELOW; dotbelowmod, *dotbelowmod
 17212 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17213 % U+0331 COMBINING MACRON BELOW; macronbelowmod
 17214 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17215 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublemod
 17216 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

17217 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17218 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17219 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek

17220 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
17221 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
17222 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
17223 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
17224 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
17225 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
17226 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
17227 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
17228 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
17229 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
17230 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
17231 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
17232 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
17233 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
17234 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
17235 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
17236 % iotadiesisistonos
17237 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
17238 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
17239 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
17240 % U+0392 GREEK CAPITAL LETTER BETA; Beta
17241 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
17242 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
17243 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
17244 % U+0394 GREEK CAPITAL LETTER DELTA; Delta; \Delta (LaTeX)
17245 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
17246 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
17247 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
17248 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
17249 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
17250 % U+0397 GREEK CAPITAL LETTER ETA; Eta
17251 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
17252 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
17253 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
17254 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
17255 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
17256 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
17257 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
17258 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
17259 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
17260 % U+039C GREEK CAPITAL LETTER MU; Mu
17261 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
17262 % U+039D GREEK CAPITAL LETTER NU; Nu
17263 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17264 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17265 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17266 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17267 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17268 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17269 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17270 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17271 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17272 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17273 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17274 % U+03A4 GREEK CAPITAL LETTER TAU; Tau

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17275 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17276 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
17277 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17278 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17279 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17280 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17281 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17282 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
17283 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17284 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek; *Omega;
17285 % \Omega (LaTeX)
17286 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17287 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17288 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17289 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17290 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
    silondieresis
17291 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17292 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
17293 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}%* U+03AC
17294 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
17295 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
17296 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
17297 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
17298 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
17299 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
17300 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17301 % AND TONOS; upsilondieresis
17302 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
17303 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17304 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17305 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17306 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17307 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17308 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17309 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17310 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17311 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17312 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17313 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17314 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17315 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17316 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17317 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17318 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17319 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17320 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17321 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17322 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17323 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17324 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17325 % U+03BC GREEK SMALL LETTER MU; mugreek; *mu; \mu (LaTeX)
17326 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17327 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17328 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17329 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17330 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE

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17331 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17332 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17333 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17334 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17335 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17336 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17337 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17338 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17339 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17340 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17341 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17342 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17343 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17344 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17345 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17346 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17347 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17348 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17349 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)
17350 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17351 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17352 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17353 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17354 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17355 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
        silondieresis
17356 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17357 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17358 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17359 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17360 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17361 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17362 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17363 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17364 % U+03DA GREEK LETTER STIGMA; Stigmatagreek
17365 \DeclareTextCommand{\textStigmatagreek}{PU}{\83\332}% U+03DA
17366 % U+03DB GREEK SMALL LETTER STIGMA
17367 \DeclareTextCommand{\textstigmatagreek}{PU}{\83\333}% U+03DB
17368 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17369 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17370 % U+03DD GREEK SMALL LETTER DIGAMMA
17371 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17372 %* \textdigammagreek -> \digamma (AmS)
17373 % U+03DE GREEK LETTER KOPPA; Koppagreek
17374 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17375 % U+03DF GREEK SMALL LETTER KOPPA
17376 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17377 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17378 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17379 % U+03E1 GREEK SMALL LETTER SAMPI
17380 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17381 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17382 % \backepsilon (AmS)
17383 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6

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51.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

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17384 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17385 \DeclareTextCompositeCommand{\`}{PU}{\CYRE}{\84\000}% U+0400
17386 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
17387 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17388 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% U+0401
17389 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
17390 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17391 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
17392 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
17393 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
17394 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17395 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
17396 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17397 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17398 % Icyrrilic, *afii10055
17399 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17400 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
17401 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
17402 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
17403 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17404 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17405 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17406 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17407 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17408 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17409 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17410 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17411 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17412 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
17413 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17414 \DeclareTextCompositeCommand{\`}{PU}{\CYRI}{\84\015}% U+040D
17415 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrilic, *afii10062
17416 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17417 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17418 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17419 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17420 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17421 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17422 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17423 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17424 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17425 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17426 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17427 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17428 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17429 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17430 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17431 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17432 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17433 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17434 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17435 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17436 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrrilic, *afii10026
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17437 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17438 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
17439 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17440 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17441 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17442 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17443 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17444 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17445 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17446 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17447 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17448 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17449 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17450 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17451 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17452 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17453 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17454 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17455 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17456 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17457 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17458 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
17459 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17460 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17461 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17462 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17463 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17464 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17465 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17466 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17467 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17468 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17469 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17470 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17471 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17472 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17473 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17474 % Hardsigncyrillic, *afii10044
17475 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17476 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17477 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17478 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17479 % Softsigncyrillic, *afii10046
17480 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17481 % U+042D CYRILLIC CAPITAL LETTER E; Eversedcyrillic, *afii10047
17482 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17483 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17484 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17485 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17486 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17487 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17488 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17489 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17490 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17491 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17492 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17493 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic

17494 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17495 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17496 \DeclareTextCommand{\cyr d}{PU}{\84\064}% U+0434
17497 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17498 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17499 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
17500 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17501 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17502 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17503 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17504 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17505 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17506 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17507 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17508 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17509 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17510 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17511 \DeclareTextCommand{\cyr l}{PU}{\84\073}% U+043B
17512 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17513 \DeclareTextCommand{\cyr m}{PU}{\84\074}% U+043C
17514 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17515 \DeclareTextCommand{\cyr n}{PU}{\84\075}% U+043D
17516 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
17517 \DeclareTextCommand{\cyr o}{PU}{\84\076}% U+043E
17518 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
17519 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
17520 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
17521 \DeclareTextCommand{\cyr r}{PU}{\84\100}% U+0440
17522 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
17523 \DeclareTextCommand{\cyr s}{PU}{\84\101}% U+0441
17524 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
17525 \DeclareTextCommand{\cyr t}{PU}{\84\102}% U+0442
17526 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
17527 \DeclareTextCommand{\cyr u}{PU}{\84\103}% U+0443
17528 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
17529 \DeclareTextCommand{\cyr f}{PU}{\84\104}% U+0444
17530 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
17531 \DeclareTextCommand{\cyr h}{PU}{\84\105}% U+0445
17532 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
17533 \DeclareTextCommand{\cyr c}{PU}{\84\106}% U+0446
17534 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
17535 \DeclareTextCommand{\cyr ch}{PU}{\84\107}% U+0447
17536 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
17537 \DeclareTextCommand{\cyr sh}{PU}{\84\110}% U+0448
17538 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
17539 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
17540 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
17541 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
17542 %* \cyrhrdsn -> \hardsign (tipa)
17543 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
17544 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
17545 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
17546 \DeclareTextCommand{\cyr sftsn}{PU}{\84\114}% U+044C
17547 %* \cyr sftsn -> \softsign (tipa)
17548 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
17549 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D

17550 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
17551 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
17552 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
17553 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
17554 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
17555 \DeclareTextCompositeCommand{\`}{PU}{\cyre}{\84\120}% U+0450
17556 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
17557 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
17558 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
17559 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
17560 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
17561 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
17562 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
17563 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
17564 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
17565 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
17566 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
17567 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
17568 % *afii10103, icyrillic
17569 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
17570 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
17571 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
17572 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
17573 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17574 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17575 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17576 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
17577 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17578 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17579 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17580 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17581 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17582 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
17583 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17584 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
17585 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17586 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17587 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17588 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17589 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17590 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17591 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17592 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17593 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17594 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17595 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17596 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17597 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
17598 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17599 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17600 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17601 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17602 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
17603 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17604 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
17605 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467

17606 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
 otifiedcyrillic
 17607 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 17608 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleioti-
 fiedcyrillic
 17609 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 17610 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 17611 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 17612 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 17613 \DeclareTextCommand{\cyrbysus}{PU}{\84\153}% U+046B
 17614 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 17615 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 17616 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
 cyrillic
 17617 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 17618 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 17619 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 17620 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 17621 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 17622 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 17623 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 17624 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 17625 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17626 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 17627 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17628 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 17629 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17630 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 17631 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17632 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 17633 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17634 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17635 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17636 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17637 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17638 % GRAVE ACCENT; izhitsadblgravecyrillic
 17639 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17640 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17641 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17642 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17643 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17644 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 17645 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17646 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17647 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17648 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
 locyrillic
 17649 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17650 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
 cyrillic
 17651 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17652 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17653 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17654 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17655 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F

17656 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17657 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17658 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17659 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17660 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17661 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-
 cyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneu-
 matacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-
 acyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17662 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17663 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17664 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17665 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17666 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17667 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 17668 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17669 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17670 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17671 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17672 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17673 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17674 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17675 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17676 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 17677 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17678 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17679 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17680 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17681 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17682 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17683 % Ghemiddlehookcyrillic
 17684 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17685 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17686 % ghemiddlehookcyrillic
 17687 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17688 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17689 % Zhedescendercyrillic
 17690 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17691 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17692 % zhedescendercyrillic
 17693 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17694 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17695 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17696 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17697 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-

cyrillic

17698 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499

17699 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499

17700 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic

17701 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A

17702 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic

17703 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B

17704 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;

17705 % Kavertikalstrokecyrillic

17706 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C

17707 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;

17708 % kavertikalstrokecyrillic

17709 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D

17710 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic

17711 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E

17712 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic

17713 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F

17714 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic

17715 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0

17716 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic

17717 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1

17718 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic

17719 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2

17720 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic

17721 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3

17722 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic

17723 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4

17724 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic

17725 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5

17726 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic

17727 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6

17728 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic

17729 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7

17730 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic

17731 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8

17732 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic

17733 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9

17734 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic

17735 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA

17736 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA

17737 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic

17738 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB

17739 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB

17740 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic

17741 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC

17742 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic

17743 \DeclareTextCommand{\cyrtddsc}{PU}{\84\255}% U+04AD
17744 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
17745 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
17746 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
17747 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
17748 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
17749 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
17750 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
17751 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
17752 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
17753 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
17754 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
17755 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
17756 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
17757 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
17758 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
17759 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
17760 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
17761 % Chedescendercyrillic
17762 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
17763 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
17764 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
17765 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
17766 % Cheverticalstrokecyrillic
17767 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17768 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17769 % cheverticalstrokecyrillic
17770 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17771 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17772 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17773 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17774 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17775 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
17776 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17777 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
17778 \DeclareTextCommand{\cyrahbch}{PU}{\84\275}% U+04BD
17779 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
17780 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17781 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17782 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
17783 \DeclareTextCommand{\cyrahbchdsc}{PU}{\84\277}% U+04BF
17784 \DeclareTextCompositeCommand{\k}{PU}{\cyrahbch}{\84\277}% U+04BF
17785 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17786 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17787 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17788 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17789 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17790 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2

17791 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 17792 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 17793 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 17794 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 17795 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 17796 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 17797 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 17798 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 17799 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 17800 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 17801 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 17802 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 17803 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakas-
 siancyrillic
 17804 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 17805 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 17806 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 17807 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 17808 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 17809 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 17810 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 17811 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevcyrillic
 17812 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 17813 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevcyrillic
 17814 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 17815 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyri-
 lic
 17816 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 17817 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 17818 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 17819 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 17820 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 17821 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 17822 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 17823 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 17824 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 17825 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 17826 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 17827 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 17828 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 17829 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 17830 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 17831 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
 17832 % Schwadiescyrillic
 17833 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 17834 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
 17835 % schwadiescyrillic
 17836 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
 17837 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
 siscyrillic
 17838 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
 17839 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieres-
 cyrillic
 17840 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
 17841 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieres-

cyrillic

17842 \DeclareTextCompositeCommand{\}{PU}{\CYRZ}{\84\336}% U+04DE

17843 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic

17844 \DeclareTextCompositeCommand{\}{PU}{\cyrz}{\84\337}% U+04DF

17845 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic

17846 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0

17847 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic

17848 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1

17849 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic

17850 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2

17851 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic

17852 \DeclareTextCompositeCommand{=}{PU}{\cyrI}{\84\343}% U+04E3

17853 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic

17854 \DeclareTextCompositeCommand{\}{PU}{\CYRI}{\84\344}% U+04E4

17855 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic

17856 \DeclareTextCompositeCommand{\}{PU}{\cyrI}{\84\345}% U+04E5

17857 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic

17858 \DeclareTextCompositeCommand{\}{PU}{\CYRO}{\84\346}% U+04E6

17859 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic

17860 \DeclareTextCompositeCommand{\}{PU}{\cyro}{\84\347}% U+04E7

17861 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic

17862 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8

17863 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic

17864 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9

17865 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;

17866 % Obarreddieresiscyrillic

17867 \DeclareTextCompositeCommand{\}{PU}{\CYROTLD}{\84\352}% U+04EA

17868 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;

17869 % obarreddieresiscyrillic

17870 \DeclareTextCompositeCommand{\}{PU}{\cyrotld}{\84\353}% U+04EB

17871 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS

17872 \DeclareTextCompositeCommand{\}{PU}{\CYREREV}{\84\354}% U+04EC

17873 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS

17874 \DeclareTextCompositeCommand{\}{PU}{\cyreref}{\84\355}% U+04ED

17875 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic

17876 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE

17877 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic

17878 \DeclareTextCompositeCommand{=}{PU}{\cyrU}{\84\357}% U+04EF

17879 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic

17880 \DeclareTextCompositeCommand{\}{PU}{\CYRU}{\84\360}% U+04F0

17881 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic

17882 \DeclareTextCompositeCommand{\}{PU}{\cyru}{\84\361}% U+04F1

17883 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic

17884 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2

17885 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic

17886 \DeclareTextCompositeCommand{\H}{PU}{\cyrU}{\84\363}% U+04F3

17887 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic

17888 \DeclareTextCompositeCommand{\}{PU}{\CYRCH}{\84\364}% U+04F4

17889 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic

cyrillic

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17890 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
17891 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17892 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17893 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17894 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17895 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
      siscyrillic
17896 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17897 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
      siscyrillic
17898 \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
17899 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17900 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17901 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17902 \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

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51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

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17903 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17904 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17905 % U+05D0 HEBREW LETTER ALEF
17906 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17907 % U+05D1 HEBREW LETTER BET
17908 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17909 % U+05D2 HEBREW LETTER GIMEL
17910 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17911 % U+05D3 HEBREW LETTER DALET
17912 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17913 % U+05D4 HEBREW LETTER HE
17914 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17915 % U+05D5 HEBREW LETTER VAV
17916 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17917 % U+05D6 HEBREW LETTER ZAYIN
17918 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17919 % U+05D7 HEBREW LETTER HET
17920 \DeclareTextCommand{\hebbet}{PU}{\85\327}% U+05D7
17921 % U+05D8 HEBREW LETTER TET
17922 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17923 % U+05D9 HEBREW LETTER YOD
17924 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17925 % U+05DA HEBREW LETTER FINAL KAF
17926 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17927 % U+05DB HEBREW LETTER KAF
17928 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
17929 % U+05DC HEBREW LETTER LAMED
17930 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17931 % U+05DD HEBREW LETTER FINAL MEM
17932 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD

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17933 % U+05DE HEBREW LETTER MEM
 17934 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
 17935 % U+05DF HEBREW LETTER FINAL NUN
 17936 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
 17937 % U+05E0 HEBREW LETTER NUN
 17938 \DeclareTextCommand{\hebnnun}{PU}{\85\340}% U+05E0
 17939 % U+05E1 HEBREW LETTER SAMEKH
 17940 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
 17941 % U+05E2 HEBREW LETTER AYIN
 17942 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
 17943 % U+05E3 HEBREW LETTER FINAL PE
 17944 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
 17945 % U+05E4 HEBREW LETTER PE
 17946 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
 17947 % U+05E5 HEBREW LETTER FINAL TSADI
 17948 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
 17949 % U+05E6 HEBREW LETTER TSADI
 17950 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
 17951 % U+05E7 HEBREW LETTER QOF
 17952 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
 17953 % U+05E8 HEBREW LETTER RESH
 17954 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
 17955 % U+05E9 HEBREW LETTER SHIN
 17956 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
 17957 %* \hebshin -> \hebsin (he8)
 17958 % U+05EA HEBREW LETTER TAV
 17959 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17960 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17961 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17962 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17963 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17964 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17965 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

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

17966 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17967 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

17968 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textsc (tipa)
 17969 \DeclareTextCommand{\textsc}{PU}{\9035\000}% U+1D00
 17970 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17971 \DeclareTextCommand{\textscd}{PU}{\9035\005}% U+1D05
 17972 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textsce (tipa)
 17973 \DeclareTextCommand{\textsce}{PU}{\9035\007}% U+1D07
 17974 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscj (tipa)
 17975 \DeclareTextCommand{\textscj}{PU}{\9035\012}% U+1D0A
 17976 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textsck (tipx)
 17977 \DeclareTextCommand{\textPUsc}{PU}{\9035\013}% U+1D0B
 17978 %* \textPUsc -> \textsc (tipx)
 17979 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscm (tipx)
 17980 \DeclareTextCommand{\textPUscm}{PU}{\9035\015}% U+1D0D
 17981 %* \textPUscm -> \textscm (tipx)
 17982 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscp (tipx)
 17983 \DeclareTextCommand{\textPUscp}{PU}{\9035\030}% U+1D18
 17984 %* \textPUscp -> \textscp (tipx)

17985 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17986 \DeclareTextCommand{\textPurevscr}{PU}{\9035\031}% U+1D19
 17987 %* \textPurevscr -> \textrevscr (tipx)
 17988 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscu (tipa), \scu (wsuipa)
 17989 \DeclareTextCommand{\textscu}{PU}{\9035\034}%* U+1D1C
 17990 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17991 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}%* U+1D62
 17992 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17993 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}%* U+1D63
 17994 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17995 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}%* U+1D64
 17996 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17997 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}%* U+1D65
 17998 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17999 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}%* U+1D66
 18000 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 18001 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}%* U+1D67
 18002 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 18003 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}%* U+1D68
 18004 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 18005 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}%* U+1D69
 18006 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 18007 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}%* U+1D6A
 18008 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;
 18009 % \barsci (wsuipa)
 18010 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
 18011 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
 18012 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
 18013 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
 18014 % \barscu (wsuipa)
 18015 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

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

18016 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
 trhooka (tipx)
 18017 \DeclareTextCommand{\textPURhooka}{PU}{\9035\217}% U+1D8F
 18018 %* \textPURhooka -> \textrhooka (tipx)
 18019 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
 taild (tipa)
 18020 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
 18021 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
 trhooke (tipx)
 18022 \DeclareTextCommand{\textPURhooke}{PU}{\9035\222}% U+1D92
 18023 %* \textPURhooke -> \textrhooke (tipx)
 18024 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
 18025 % \textrhookepsilon (tipx)
 18026 \DeclareTextCommand{\textPURhookepsilon}{PU}{\9035\223}% U+1D93
 18027 %* \textPURhookepsilon -> \textrhookepsilon (tipx)
 18028 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
 18029 % \textrhookopeno (tipx)
 18030 \DeclareTextCommand{\textPURhookopeno}{PU}{\9035\227}% U+1D97
 18031 %* \textPURhookopeno -> \textrhookopeno (tipx)

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

18032 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
 18033 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
 18034 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow

18035 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
18036 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
18037 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
18038 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
18039 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
18040 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
18041 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
18042 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
18043 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
18044 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
18045 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
18046 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
18047 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
18048 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
18049 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
18050 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
18051 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
18052 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
18053 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
18054 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
18055 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
18056 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
18057 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
18058 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
18059 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
18060 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
18061 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
18062 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
18063 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
18064 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
18065 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
18066 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
18067 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
18068 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
18069 % Emacrongrave
18070 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
18071 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
18072 % emacrongrave
18073 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
18074 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
18075 % Emacronacute
18076 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
18077 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
18078 % emacronacute
18079 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
18080 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
18081 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18082 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18083 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18084 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18085 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18086 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18087 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B

18088 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
18089 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
18090 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
18091 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
18092 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
18093 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
18094 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
18095 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
18096 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
18097 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
18098 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
18099 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
18100 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
18101 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
18102 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
18103 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18104 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18105 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
18106 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18107 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
18108 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18109 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18110 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18111 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
18112 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
18113 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
18114 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
18115 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
18116 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
18117 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
18118 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
18119 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
18120 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
18121 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
18122 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
18123 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
18124 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
18125 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
18126 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
18127 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
18128 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
18129 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
18130 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
18131 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
18132 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
18133 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
18134 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
18135 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
18136 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
18137 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
18138 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
18139 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
18140 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
18141 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
18142 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow

18143 \DeclareTextCompositeCommand{\textsubcircum}{PU}{1}{\9036\075}% U+1E3D
18144 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
18145 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
18146 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
18147 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
18148 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
18149 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
18150 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
18151 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
18152 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
18153 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
18154 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
18155 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
18156 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
18157 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
18158 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
18159 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
18160 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
18161 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
18162 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
18163 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
18164 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
18165 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
18166 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
18167 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
18168 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
cumflexbelow
18169 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
18170 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
cumflexbelow
18171 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
18172 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
18173 % Omacrongrave
18174 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
18175 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
18176 % omacrongrave
18177 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
18178 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
18179 % Omacronacute
18180 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
18181 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
18182 % omacronacute
18183 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
18184 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
18185 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
18186 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
18187 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
18188 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
18189 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
18190 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
18191 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
18192 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
18193 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
18194 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
18195 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
18196 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
18197 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A

18198 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 18199 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 18200 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 18201 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 18202 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 18203 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 18204 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 18205 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 18206 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 18207 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 18208 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 18209 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 18210 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 18211 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 18212 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 18213 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 18214 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 18215 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 18216 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 18217 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 18218 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 18219 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 18220 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 18221 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
 18222 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 18223 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 18224 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 18225 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 18226 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 18227 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 18228 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 18229 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 18230 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udiere-
 sisbelow
 18231 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 18232 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 18233 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 18234 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 18235 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 18236 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 18237 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 18238 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 18239 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 18240 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 18241 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 18242 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 18243 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 18244 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 18245 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 18246 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 18247 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 18248 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave

18249 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
18250 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
18251 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
18252 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
18253 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
18254 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
18255 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
18256 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
18257 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
18258 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
18259 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
18260 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
18261 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
18262 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
18263 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
18264 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
18265 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
18266 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
18267 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
18268 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
18269 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
18270 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
18271 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
18272 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
18273 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
18274 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
18275 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
18276 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
18277 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
18278 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
18279 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
18280 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
18281 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
18282 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
18283 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
18284 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
18285 \DeclareTextCompositeCommand{\d}{PU}{Z}{\9036\222}% U+1E92
18286 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
18287 \DeclareTextCompositeCommand{\d}{PU}{z}{\9036\223}% U+1E93
18288 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
18289 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
18290 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
18291 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
18292 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
18293 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
18294 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
18295 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
18296 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
18297 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
18298 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
18299 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
18300 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
taccent
18301 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
18302 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
18303 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
18304 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow

18305 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 18306 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 18307 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 18308 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 18309 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 18310 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 18311 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 18312 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 18313 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 18314 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 18315 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 18316 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 18317 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 18318 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 18319 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 18320 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18321 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 18322 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18323 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 18324 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18325 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 18326 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18327 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 18328 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 18329 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 18330 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18331 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18332 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18333 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18334 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18335 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18336 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18337 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

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

18338 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18339 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18340 % U+2013 EN DASH; endash
 18341 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18342 % U+2014 EM DASH; emdash
 18343 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18344 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18345 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18346 %* \textbardbl -> \textdoublevertline (tipa)
 18347 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18348 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18349 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18350 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18351 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18352 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18353 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18354 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18355 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18356 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18357 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18358 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18359 % U+2020 DAGGER; dagger

18360 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18361 %* \textdagger -> \dag (LaTeX)
 18362 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18363 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18364 %* \textdaggerdbl -> \ddagger (LaTeX)
 18365 %* \textdaggerdbl -> \ddag (LaTeX)
 18366 % U+2022 BULLET; bullet
 18367 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18368 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18369 \DeclareTextCommand{\textthdotfor}{PU}{\9040\045}%* U+2025
 18370 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18371 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18372 %* \textellipsis -> \mathellipsis
 18373 % U+2030 PER MILLE SIGN; perthousand
 18374 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18375 % U+2031 PER TEN THOUSAND SIGN
 18376 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18377 % U+2032 PRIME; minute; \prime (MnSymbol)
 18378 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18379 % U+2033 DOUBLE PRIME; \second (mathabx)
 18380 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18381 % U+2034 TRIPLE PRIME; \third (mathabx)
 18382 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18383 % U+2035 REVERSED PRIME; \backprime (AmsS)
 18384 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18385 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 18386 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 18387 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 18388 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 18389 % U+203B REFERENCE MARK; referencemark
 18390 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18391 % U+203D INTERROBANG
 18392 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18393 % U+2044 FRACTION SLASH; fraction
 18394 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18395 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18396 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18397 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18398 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18399 % U+2052 COMMERCIAL MINUS SIGN
 18400 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18401 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18402 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18403 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18404 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18405 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18406 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

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

18407 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18408 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18409 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18410 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18411 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18412 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074

18413 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18414 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18415 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18416 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18417 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18418 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18419 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18420 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18421 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18422 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18423 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18424 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18425 % U+207B SUPERSCRIPT MINUS
 18426 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18427 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18428 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 18429 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18430 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18431 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18432 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18433 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18434 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18435 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18436 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080
 18437 % U+2081 SUBSCRIPT ONE; oneinferior
 18438 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18439 % U+2082 SUBSCRIPT TWO; twoinferior
 18440 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18441 % U+2083 SUBSCRIPT THREE; threeinferior
 18442 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18443 % U+2084 SUBSCRIPT FOUR; fourinferior
 18444 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18445 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18446 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18447 % U+2086 SUBSCRIPT SIX; sixinferior
 18448 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18449 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18450 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18451 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18452 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18453 % U+2089 SUBSCRIPT NINE; nineinferior
 18454 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18455 % U+208A SUBSCRIPT PLUS SIGN
 18456 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18457 % U+208B SUBSCRIPT MINUS
 18458 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18459 % U+208C SUBSCRIPT EQUALS SIGN
 18460 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18461 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18462 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18463 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18464 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18465 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18466 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18467 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18468 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18469 % U+2092 LATIN SUBSCRIPT SMALL LETTER O

18470 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18471 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18472 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18473 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18474 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18475 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18476 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18477 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18478 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18479 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18480 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18481 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18482 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18483 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18484 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18485 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18486 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18487 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18488 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18489 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18490 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

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

18491 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 18492 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18493 % U+20A4 LIRA SIGN; afi08941, *lira
 18494 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18495 % U+20A6 NAIRA SIGN
 18496 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18497 % U+20A7 PESETA SIGN; peseta
 18498 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18499 % U+20A9 WON SIGN; won
 18500 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18501 % U+20AB DONG SIGN; dong
 18502 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18503 % U+20AC EURO SIGN; *Euro, euro
 18504 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18505 %* \texteuro -> \EurDig (marvosym)
 18506 %* \texteuro -> \EURdig (marvosym)
 18507 %* \texteuro -> \EurHv (marvosym)
 18508 %* \texteuro -> \EURhv (marvosym)
 18509 %* \texteuro -> \EurCr (marvosym)
 18510 %* \texteuro -> \EURcr (marvosym)
 18511 %* \texteuro -> \EurTm (marvosym)
 18512 %* \texteuro -> \EURtm (marvosym)
 18513 %* \texteuro -> \Eur (marvosym)
 18514 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18515 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18516 %* \textDeleatur -> \Denarius (marvosym)
 18517 % U+20B1 PESO SIGN
 18518 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18519 % U+20B2 GUARANI SIGN
 18520 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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

18521 % U+2103 DEGREE CELSIUS; centigrade
 18522 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103

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18523 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
18524 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
18525 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (La-
TeX)
18526 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
18527 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
18528 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
18529 % U+2116 NUMERO SIGN; *afii61352, numero
18530 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
18531 % U+2117 SOUND RECORDING COPYRIGHT
18532 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
18533 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
18534 % weierstrass; \wp (LaTeX)
18535 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
18536 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
18537 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
18538 % U+211E PRESCRIPTION TAKE; prescription
18539 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
18540 % U+2120 SERVICE MARK
18541 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
18542 % U+2122 TRADE MARK SIGN; trademark
18543 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
18544 % U+2126 OHM SIGN; Ohm, Omega
18545 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
18546 % U+2127 INVERTED OHM SIGN
18547 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
18548 %* \textmho -> \agemO (wasysym)
18549 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
18550 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
18551 % U+212B ANGSTROM SIGN; angstrom
18552 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
18553 % U+212E ESTIMATED SYMBOL; estimated
18554 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
18555 %* \textestimated -> \EstimatedSign (marvosym)
18556 %* \textestimated -> \Ecommerce (marvosym)
18557 % U+2132 TURNED CAPITAL F; \Finv (AmS)
18558 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
18559 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
18560 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
18561 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
18562 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
18563 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
18564 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
18565 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
18566 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
18567 % U+213B FACSIMILE SIGN; \fax (marvosym)
18568 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
18569 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
18570 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
18571 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
18572 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
18573 %* \textinvamp -> \bindnasrepma (stmaryrd)
18574 %* \textinvamp -> \parr (cml)

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

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18575 % U+2150 VULGAR FRACTION ONE SEVENTH
18576 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150

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18577 % U+2151 VULGAR FRACTION ONE NINTH
 18578 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18579 % U+2152 VULGAR FRACTION ONE TENTH
 18580 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18581 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18582 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18583 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18584 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18585 % U+2155 VULGAR FRACTION ONE FIFTH
 18586 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18587 % U+2156 VULGAR FRACTION TWO FIFTHS
 18588 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18589 % U+2157 VULGAR FRACTION THREE FIFTHS
 18590 \DeclareTextCommand{\textthreelfths}{PU}{\9041\127}% U+2157
 18591 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18592 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18593 % U+2159 VULGAR FRACTION ONE SIXTH
 18594 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18595 % U+215A VULGAR FRACTION FIVE SIXTHS
 18596 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18597 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18598 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18599 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18600 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C
 18601 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
 18602 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
 18603 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
 18604 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
 18605 % U+2184 LATIN SMALL LETTER REVERSED C
 18606 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
 18607 % U+2189 VULGAR FRACTION ZERO THIRDS
 18608 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18609 % U+2190 LEFTWARDS ARROW; arrowleft
 18610 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
 18611 % U+2191 UPWARDS ARROW; arrowup
 18612 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
 18613 % U+2192 RIGHTWARDS ARROW; arrowright
 18614 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
 18615 %* \textrightarrow -> \MVRightArrow (marvosym)
 18616 %* \textrightarrow -> \MVRightarrow (marvosym)
 18617 % U+2193 DOWNWARDS ARROW; arrowdown
 18618 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
 18619 %* \textdownarrow -> \MVArrowDown (marvosym)
 18620 %* \textdownarrow -> \Force (marvosym)
 18621 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightarrow (LaTeX)
 18622 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\224}%* U+2194
 18623 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
 18624 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
 18625 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
 18626 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
 18627 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
 18628 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
 18629 %* \textnearrow -> \textglobrise (tipa)
 18630 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
 18631 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198

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18632 %* \textsearrow -> \textglobfall (tipa)
18633 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18634 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18635 % U+219A LEFTWARDS ARROW WITH STROKE; \leftarrow (AmS)
18636 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18637 % U+219B RIGHTWARDS ARROW WITH STROKE; \rightarrow (AmS)
18638 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18639 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18640 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18641 % \ntwoheadleftarrow (txfonts/pxfonts)
18642 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18643 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18644 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18645 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18646 % \twoheadrightarrow (AmS)
18647 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18648 % \ntwoheadrightarrow (txfonts/pxfonts)
18649 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18650 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
18651 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18652 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18653 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18654 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)
18655 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18656 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18657 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18658 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18659 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18660 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18661 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18662 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18663 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18664 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18665 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18666 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightarrow (AmS)
18667 \DeclareTextCommand{\textleftrightarrow}{PU}{\9041\256}%* U+21AE
18668 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18669 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18670 %* \textlightning -> \Lightning (marvosym)
18671 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18672 % \dls (mathabx)
18673 \DeclareTextCommand{\textdls}{PU}{\9041\265}%* U+21B5
18674 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18675 % \curvearrowleft (AmS)
18676 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18677 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18678 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18679 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
barbup;
18680 % \leftharpoonup (LaTeX)
18681 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18682 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18683 % \leftharpoondown (LaTeX)
18684 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18685 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18686 % \upharpoonright (AmS)

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18687 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18688 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18689 % \upharpoonleft (AmS)
18690 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18691 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
      barbup
18692 % \rightharpoonup (LaTeX)
18693 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18694 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18695 % \rightharpoondown (LaTeX)
18696 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18697 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18698 % \downharpoonright (AmS)
18699 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18700 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18701 % \downharpoonleft (AmS)
18702 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18703 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18704 % arrowrightoverleft; \rightleftarrows (MnSymbol)
18705 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18706 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
      rowupleftofdown;
18707 % \updownarrows (MnSymbol)
18708 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5
18709 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
      overright;
18710 % \leftrightarrows (AmS)
18711 \DeclareTextCommand{\textleftrightarrows}{PU}{\9041\306}%* U+21C6
18712 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18713 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18714 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18715 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18716 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18717 \DeclareTextCommand{\textrightrightarrows}{PU}{\9041\311}%* U+21C9
18718 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18719 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18720 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18721 % \leftrightharpoons (AmS);
18722 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18723 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18724 % \rightleftharpoons (LaTeX, AmS)
18725 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18726 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
      blstroke;
18727 % \nLeftarrow (AmS)
18728 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18729 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightar-
      row (AmS)
18730 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18731 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
      blstroke;
18732 % \nRightarrow (AmS)
18733 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18734 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18735 % \Leftarrow (LaTeX)
18736 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18737 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)

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18738 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18739 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18740 % \Rrightarrow (LaTeX)
18741 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\322}%* U+21D2
18742 %* \textRrightarrow -> \Conclusion (marvosym)
18743 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (LaTeX)
18744 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18745 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18746 % \Leftrightarrow (LaTeX)
18747 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18748 %* \textLeftrightarrow -> \Equivalence (marvosym)
18749 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18750 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18751 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18752 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18753 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18754 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18755 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18756 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18757 % U+21D9 SOUTH WEST DOUBLE ARROW; \Swarrow (MnSymbol)
18758 \DeclareTextCommand{\textSwarrow}{PU}{\9041\331}%* U+21D9
18759 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18760 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA
18761 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18762 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18763 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18764 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18765 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18766 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18767 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18768 % \dashleftarrow (AmS)
18769 \DeclareTextCommand{\texdashleftarrow}{PU}{\9041\340}%* U+21E0
18770 %* \texdashleftarrow -> \dashedleftarrow (MnSymbol)
18771 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (MnSymbol)
18772 \DeclareTextCommand{\texdasheduparrow}{PU}{\9041\341}%* U+21E1
18773 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow (AmS)
18774 \DeclareTextCommand{\texdashrightarrow}{PU}{\9041\342}%* U+21E2
18775 %* \texdashrightarrow -> \dashedrightarrow (MnSymbol)
18776 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow (MnSymbol)
18777 \DeclareTextCommand{\texdasheddownarrow}{PU}{\9041\343}%* U+21E3
18778 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18779 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18780 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18781 % \downuparrows (MnSymbol)
18782 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18783 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18784 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18785 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18786 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18787 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle (stmaryrd)
18788 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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

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18789 % U+2200 FOR ALL; forall; \forall (LaTeX)
18790 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18791 % U+2201 COMPLEMENT; \complement (AmS)
18792 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18793 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18794 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18795 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18796 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18797 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18798 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18799 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18800 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18801 %* \textemptyset -> \varnothing (AmS)
18802 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18803 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18804 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18805 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18806 % U+2208 ELEMENT OF; element; \in (LaTeX)
18807 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18808 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18809 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18810 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18811 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A
18812 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18813 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18814 %* \textni -> \owns (mathabx)
18815 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18816 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18817 %* \textnotowner -> \notni (txfonts/pxfonts)
18818 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18819 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18820 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18821 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18822 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18823 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18824 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18825 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18826 % U+2212 MINUS SIGN; minus
18827 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18828 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18829 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18830 % U+2214 DOT PLUS; \dotplus (AmS)
18831 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18832 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18833 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18834 % \DividesNot (marvosym)
18835 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18836 % U+2216 SET MINUS; \setminus (LaTeX)
18837 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18838 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18839 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18840 % U+2218 RING OPERATOR; \circ (LaTeX)
18841 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18842 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18843 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18844 % U+221A SQUARE ROOT; radical

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18845 \DeclareTextCommand{\textsurd}{PU}{\9042\032}%* U+221A
18846 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18847 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18848 %* \textpropto -> \varprop (wasysym)
18849 % U+221E INFINITY; infinity; \infty (LaTeX)
18850 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18851 % U+2220 ANGLE; angle; \angle (LaTeX)
18852 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18853 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18854 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18855 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18856 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18857 %* \textsphericalangle -> \varangle (wasysym)
18858 %* \textsphericalangle -> \Anglesign (marvosym)
18859 %* \textsphericalangle -> \AngleSign (marvosym)
18860 % U+2223 DIVIDES; divides; \mid (LaTeX)
18861 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18862 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18863 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18864 %* \textnmid -> \notdivides (mathabx)
18865 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18866 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18867 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18868 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226
18869 %* \textnparallel -> nUpdownline (MnSymbol)
18870 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18871 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18872 % \owedge (stmaryrd)
18873 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18874 %* \textowedge -> \varowedge (stmaryrd)
18875 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18876 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18877 % \ovee (stmaryrd)
18878 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18879 %* \textovee -> \varovee (stmaryrd)
18880 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18881 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18882 % U+222A UNION; union; \cup (LaTeX)
18883 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18884 % U+222B INTEGRAL; integral; \int (LaTeX)
18885 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18886 %* \textint -> \varint (wasysym)
18887 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18888 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18889 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18890 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18891 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18892 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18893 %* \textoint -> \varoint (wasysym)
18894 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18895 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18896 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18897 % \ointclockwise (txfonts/pxfonts)
18898 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18899 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
      fonts/pxfonts)
18900 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233

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18901 % U+2234 THEREFORE; therefore; \therefore (AmS)
18902 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18903 %* \texttherefore -> uptherefore (MnSymbol)
18904 % U+2235 BECAUSE; because; \because (AmS)
18905 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18906 %* \textbecause -> \downtherefore (MnSymbol)
18907 % U+2236 RATIO; \vdotdot (MnSymbol)
18908 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18909 % U+2237 PROPORTION; \squaredots (MnSymbol)
18910 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18911 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18912 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18913 %* \textdotminus -> \textdotdiv (mathabx)
18914 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18915 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18916 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18917 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18918 %* \textsim -> \AC (wasysym)
18919 % U+223D REVERSED TILDE; reversedtilde; \backsim (AmS)
18920 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18921 % \nbacksim (txfonts/pxfonts)
18922 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18923 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18924 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240
18925 %* \textwr -> \wreath (MnSymbol)
18926 % U+2241 NOT TILDE; \nsim (AmS)
18927 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18928 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18929 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18930 % \neqsim (MnSymbol)
18931 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18932 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (LaTeX)
18933 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18934 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18935 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18936 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18937 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18938 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18939 % \ncong (AmS)
18940 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18941 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18942 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18943 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18944 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18945 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18946 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18947 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18948 % \napproxeq (txfonts/pxfonts)
18949 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18950 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18951 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18952 %* \texttriplesim -> \VHF (wasysym)
18953 % \ntriplesim (MnSymbol)
18954 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18955 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18956 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C

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18957 % \nbackcong (MnSymbol)
18958 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18959 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18960 \DeclareTextCommand{\textasym}{PU}{\9042\115}%* U+224D
18961 % \nasym (txfonts/pxfonts)
18962 \DeclareTextCommand{\textnasym}{PU}{\9042\115\83\070}%* U+224D U+0338
18963 %* \textnasym -> \notasym (mathabx)
18964 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18965 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18966 % \nBumpeq (txfonts/pxfonts)
18967 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18968 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18969 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18970 % \nbumpeq (txfonts/pxfonts)
18971 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18972 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18973 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18974 % \ndoteq (MnSymbol)
18975 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18976 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18977 % \doteqdot (AmS)
18978 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18979 %* \textdoteqdot -> \Doteq (MnSymbol)
18980 % \nDoteq (MnSymbol)
18981 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
18982 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approxi-
      qualorimage;
18983 % \fallingdotseq (AmS)
18984 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
18985 % \nfallingdotseq (MnSymbol)
18986 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
18987 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
      matelyequal;
18988 % \risingdotseq (AmS)
18989 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
18990 % \nrisingdoteq (MnSymbol)
18991 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
18992 % U+2254 COLON EQUALS; \colonequals (colonequals)
18993 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
18994 % U+2255 EQUALS COLON; \equalscolon (colonequals)
18995 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
18996 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
18997 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
18998 % \neqcirc (MnSymbol)
18999 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
19000 % U+2257 RING EQUAL TO; \circeq (AmS)
19001 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
19002 % \ncirceq (MnSymbol)
19003 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
19004 % U+2259 ESTIMATES; \hateq (MnSymbol)
19005 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
19006 %* \texthateq -> \corresponds (mathabx)
19007 %* \texthateq -> \Corresponds (marvosym)
19008 % \nhateq (MnSymbol)
19009 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
19010 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
19011 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C

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19012 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
 19013 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
 19014 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
 19015 %* \textneq -> \nequal (MnSymbol)
 19016 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
 19017 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
 19018 %* \textequiv -> \Congruent (marvosym)
 19019 % U+2262 NOT IDENTICAL TO; notidentical; \notequiv (txfonts/pxfonts)
 19020 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
 19021 %* \textnequiv -> \NotCongruent (marvosym)
 19022 %* \textnequiv -> \notequiv (mathabx)
 19023 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
 19024 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
 19025 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
 19026 %* \textleq -> \LessOrEqual (marvosym)
 19027 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
 19028 % \ge (LaTeX), \geq (LaTeX)
 19029 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
 19030 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
 19031 %* \textgeq -> \LargerOrEqual (marvosym)
 19032 % U+2266 LESS-THAN OVER EQUAL TO; lessoverequal; \leqq (AmS)
 19033 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
 19034 % \nleqq (txfonts/pxfonts)
 19035 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338
 19036 % U+2267 GREATER-THAN OVER EQUAL TO; greateroverequal; \geqq (AmS)
 19037 \DeclareTextCommand{\textgeqq}{PU}{\9042\147}%* U+2267
 19038 % \ngeqq (txfonts/pxfonts)
 19039 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
 19040 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
 19041 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
 19042 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
 19043 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
 19044 % U+226A MUCH LESS-THAN; muchless; \ll (LaTeX)
 19045 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
 19046 % \nll (txfonts/pxfonts)
 19047 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
 19048 % U+226B MUCH GREATER-THAN; muchgreater; \gg (LaTeX)
 19049 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
 19050 % \ngg (txfonts/pxfonts)
 19051 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
 19052 % U+226C BETWEEN; \between (AmS)
 19053 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
 19054 % U+226E NOT LESS-THAN; notless; \nless (AmS)
 19055 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
 19056 % U+226F NOT GREATER-THAN; notgreater; \ngtr (AmS)
 19057 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
 19058 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; notlessnorequal;
 19059 % \nleq (AmS)
 19060 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
 19061 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; notgreaternorequal;
 19062 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
 19063 % U+2272 LESS-THAN OR EQUIVALENT TO; lessorequivalent; \lesssim (AmS)
 19064 \DeclareTextCommand{\textlesssim}{PU}{\9042\162}%* U+2272
 19065 %* \textlessim -> \apprle (wasysym)
 19066 % U+2273 GREATER-THAN OR EQUIVALENT TO; greaterorequivalent; \gtrsim (AmS)

19067 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
19068 %* \textgtrsim -> \apprge (wasysym)
19069 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessim (tx-
fonts/pxfonts)
19070 \DeclareTextCommand{\textnlessim}{PU}{\9042\164}%* U+2274
19071 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-
fonts/pxfonts)
19072 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
19073 % U+2276 LESS-THAN OR GREATER-THAN; lessorgreater; \lessgtr (AmS)
19074 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
19075 % U+2277 GREATER-THAN OR LESS-THAN; greaterorless; \gtrless (AmS)
19076 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
19077 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
fonts/pxfonts)
19078 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
19079 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
fonts/pxfonts)
19080 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
19081 % U+227A PRECEDES; precedes; \prec (LaTeX)
19082 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
19083 % U+227B SUCCEEDS; succeeds; \succ (LaTeX)
19084 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
19085 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
19086 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C
19087 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
19088 \DeclareTextCommand{\textsucccurlyeq}{PU}{\9042\175}%* U+227D
19089 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
19090 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
19091 % \nprecsim (txfonts/pxfonts)
19092 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
19093 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
19094 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
19095 % \nsuccsim (txfonts/pxfonts)
19096 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
19097 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
19098 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
19099 % U+2281 DOES NOT SUCCEED; notsucceeds; \nsucc (AmS)
19100 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
19101 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
19102 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
19103 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
19104 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
19105 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
19106 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
19107 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
19108 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
19109 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseteq (LaTeX)
19110 \DeclareTextCommand{\textsubseteq}{PU}{\9042\206}%* U+2286
19111 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseteq (LaTeX)
19112 \DeclareTextCommand{\textsupseteq}{PU}{\9042\207}%* U+2287
19113 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseteq (AmS)
19114 \DeclareTextCommand{\textnsubseteq}{PU}{\9042\210}%* U+2288
19115 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseteq (AmS)
19116 \DeclareTextCommand{\textnsupseteq}{PU}{\9042\211}%* U+2289
19117 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
neq (AmS)
19118 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A

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19119 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
      neq (AmS)
19120 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
19121 % U+228D MULTISSET MULTIPLICATION; \cupdot (MnSymbol)
19122 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
19123 % U+228E MULTISSET UNION; \cupplus (MnSymbol)
19124 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
19125 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
19126 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
19127 % \nsqsubset (txfonts/pxfonts)
19128 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
19129 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
19130 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
19131 % \nsqsupset (txfonts/pxfonts)
19132 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
19133 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseq (LaTeX)
19134 \DeclareTextCommand{\textsqsubseq}{PU}{\9042\221}%* U+2291
19135 % \nsqsubseq (txfonts/pxfonts)
19136 \DeclareTextCommand{\textnsqsubseq}{PU}{\9042\221\83\070}%* U+2291 U+0338
19137 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseteq (LaTeX)
19138 \DeclareTextCommand{\textsqsupseteq}{PU}{\9042\222}%* U+2292
19139 % \nsqsupseteq (txfonts/pxfonts)
19140 \DeclareTextCommand{\textnsqsupseteq}{PU}{\9042\222\83\070}%* U+2292 U+0338
19141 % U+2293 SQUARE CAP; \sqcap (LaTeX)
19142 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19143 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19144 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19145 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19146 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19147 %* \textoplus -> \varoplus (stmaryrd)
19148 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19149 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19150 %* \textominus -> \varominus (stmaryrd)
19151 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19152 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19153 %* \textotimes -> \varotimes (stmaryrd)
19154 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19155 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19156 %* \textoslash -> \varoslash (stmaryrd)
19157 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19158 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19159 %* \textodot -> \varodot (stmaryrd)
19160 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19161 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19162 %* \textcircledcirc -> \ocirc (mathabx)
19163 %* \textcircledcirc -> \varocircle (stmaryrd)
19164 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19165 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19166 %* \textcircledast -> \varoast (stmaryrd)
19167 %* \textcircledast -> \oasterisk (mathabx)
19168 % U+229D CIRCLED DASH; \circleddash (AmS)
19169 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19170 % U+229E SQUARED PLUS; \boxplus (AmS)
19171 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19172 % U+229F SQUARED MINUS; \boxminus (AmS)
19173 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19174 % U+22A0 SQUARED TIMES; \boxtimes (AmS)

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19175 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19176 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19177 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19178 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19179 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19180 %* \textvdash -> \rightvdash (MnSymbol)
19181 % U+22A3 LEFT TACK; tackleft; \dashv (LaTeX)
19182 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19183 %* \textdashv -> \leftvdash (MnSymbol)
19184 % \ndashv (mathabx)
19185 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19186 %* \textndashv -> \nleftvdash (MnSymbol)
19187 % U+22A4 DOWN TACK (=top); tackdown; \top (LaTeX)
19188 \DeclareTextCommand{\textttop}{PU}{\9042\244}%* U+22A4
19189 %* \textttop -> \downvdash (MnSymbol)
19190 % \ndownvdash (MnSymbol)
19191 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19192 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19193 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19194 %* \textbot -> \upvdash (MnSymbol)
19195 % \nupvdash (MnSymbol)
19196 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19197 %* \textnupvdash -> \nperp (MnSymbol)
19198 % U+22A8 TRUE; \Vdash (AmS)
19199 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19200 %* \textvDash -> \models (LaTeX)
19201 %* \textvDash -> \rightmodels (MnSymbol)
19202 % U+22A9 FORCES; \Vdash (AmS)
19203 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19204 %* \textVdash -> \rightVdash (MnSymbol)
19205 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19206 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19207 % \nVvdash (mathabx)
19208 \DeclareTextCommand{\textnVvdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19209 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19210 % \VDash (mathabx)
19211 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19212 %* \textVDash -> \rightModels (MnSymbol)
19213 % U+22AC DOES NOT PROVE; \nvdash (AmS)
19214 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
19215 %* \textnvdash -> \nrightvdash (MnSymbol)
19216 % U+22AD NOT TRUE; \nvDash (AmS)
19217 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19218 %* \textnvDash -> \nrightmodels (MnSymbol)
19219 %* \textnvDash -> \nmodels (MnSymbol)
19220 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
19221 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
19222 %* \textnVdash -> \nrightVdash (MnSymbol)
19223 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
19224 % STILE; \nVDash (AmS)
19224 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19225 %* \textnVDash -> \nrightModels (MnSymbol)
19226 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19227 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19228 %* \textlhd -> \lessclosed (MnSymbol)
19229 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19230 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3

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19231 %* \texttrhd -> \gtrclosed (MnSymbol)
19232 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19233 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19234 %* \textunlhd -> \leqclosed (MnSymbol)
19235 %* \textunlhd -> \trianglelefteq (MnSymbol)
19236 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
    texsym, ...)
19237 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19238 %* \textunrhd -> \geqclosed (MnSymbol)
19239 %* \textunrhd -> \trianglerighteq (MnSymbol)
19240 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19241 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19242 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19243 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19244 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19245 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19246 % U+22BB XOR; \veebar (AmS)
19247 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19248 % U+22BC NAND; \barwedge (mathabx)
19249 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19250 % U+22C6 STAR OPERATOR; \star (LaTeX)
19251 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19252 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19253 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7
19254 % U+22C8 BOWTIE; \bowtie (LaTeX)
19255 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19256 %* \textbowtie -> \Bowtie (wasysym)
19257 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19258 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19259 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19260 % \rtimes (AmS)
19261 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19262 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19263 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19264 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19265 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19266 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19267 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19268 % \nbacksimeq (txfonts/pxfonts)
19269 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19270 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19271 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19272 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19273 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19274 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19275 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19276 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19277 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19278 % \nSubset (txfonts/pxfonts)
19279 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19280 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19281 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19282 % \nSupset (txfonts/pxfonts)
19283 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19284 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19285 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19286 %* \textCap -> \doublecap (mathabx)

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19287 % U+22D3 DOUBLE UNION; \Cup (AmS)
19288 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19289 %* \textCup -> \doublecup (mathabx)
19290 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19291 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19292 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19293 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19294 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19295 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19296 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19297 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19298 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19299 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19300 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lesseqqualorgreater;
19301 % \lesseqgtr (AmS)
19302 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19303 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
19304 % \gtreqless (AmS)
19305 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
19306 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19307 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19308 % \ncurlyeqprec (mathabx)
19309 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19310 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)
19311 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
19312 % \ncurlyeqsucc (mathabx)
19313 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
19314 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
19315 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
19316 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
19317 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
19318 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
    fonts/pxfonts)
19319 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
19320 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
    fonts/pxfonts)
19321 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
19322 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
19323 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
19324 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
19325 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
    abx)
19326 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
19327 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
19328 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
19329 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
19330 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
19331 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
19332 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
19333 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
19334 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
19335 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
19336 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
19337 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
19338 %* \textntriangleleft -> \nlessclosed (MnSymbol)
19339 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
    leright (AmS)

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19340 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
19341 %* \textntriangleright -> \ngtrclosed (MnSymbol)
19342 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
19343 % \ntrianglelefteq (AmS)
19344 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
19345 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
19346 % \ntrianglerighteq (AmS)
19347 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
19348 %* \textntrianglerighteq -> \textngeqclosed
19349 % U+22EE VERTICAL ELLIPSIS; \ellipsisvertical; \vdots (LaTeX)
19350 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
19351 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
19352 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
19353 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
19354 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
19355 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
19356 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
19357 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
19358 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

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

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19359 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
19360 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
19361 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)
19362 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
19363 % U+2311 SQUARE LOZENGE; \wasyllozenge (wasysym)
19364 \DeclareTextCommand{\textwasyllozenge}{PU}{\9043\021}%* U+2311
19365 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19366 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19367 % U+231A WATCH; \clock (wasysym)
19368 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19369 %* \textclock -> \Clocklogo (marvosym)
19370 %* \textclock -> \ClockLogo (marvosym)
19371 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
19372 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19373 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
19374 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19375 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
19376 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19377 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
19378 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19379 % U+2322 FROWN; \frown (LaTeX)
19380 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19381 % U+2323 SMILE; \smile (LaTeX)
19382 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19383 % U+2328 KEYBOARD; \Keyboard (marvosym)
19384 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19385 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
19386 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19387 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
19388 \DeclareTextCommand{\textrangle}{PU}{\9043\052}%* U+232A
19389 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
19390 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
19391 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (marvosym)
19392 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19393 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)

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19394 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
 19395 %* \textstmaryrdbaro -> \baro (stmaryrd)
 19396 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
 19397 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
 19398 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
 19399 % \notbackslash (wasysym)
 19400 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
 19401 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxback-
 slash (mathabx)
 19402 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
 19403 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
 19404 % \APLleftarrowbox (wasysym)
 19405 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
 19406 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
 19407 % \APLrightarrowbox (wasysym)
 19408 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
 19409 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLu-
 parrowbox (wasysym)
 19410 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
 19411 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
 19412 % \APLdownarrowbox (wasysym)
 19413 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
 19414 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
 19415 % \APLinput (wasysym)
 19416 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19417 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19418 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19419 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19420 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19421 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19422 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19423 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19424 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19425 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19426 % \ForwardToIndex (marvosym)
 19427 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19428 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19429 % \RewindToIndex (marvosym)
 19430 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

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

19431 % U+2422 BLANK SYMBOL
 19432 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19433 % U+2423 OPEN BOX; blank
 19434 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

19435 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19436 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19437 %* \textbbslash -> \varparallelinv (txfonts/pxfonts)

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

19438 % U+2460 CIRCLED DIGIT ONE; onecircle
 19439 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19440 % U+2461 CIRCLED DIGIT TWO; twocircle

19441 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19442 % U+2462 CIRCLED DIGIT THREE; threecircle
 19443 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19444 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19445 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19446 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19447 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19448 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19449 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19450 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 19451 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19452 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19453 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19454 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19455 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19456 % U+2469 CIRCLED NUMBER TEN; tencircle
 19457 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19458 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19459 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19460 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19461 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19462 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19463 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19464 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 19465 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 19466 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 19467 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 19468 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 19469 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 19470 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 19471 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 19472 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 19473 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 19474 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 19475 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 19476 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 19477 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 19478 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 19479 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 19480 % \CircledA (marvosym)
 19481 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
 19482 %* \textCircledA -> \CleaningA
 19483 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 19484 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 19485 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 19486 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 19487 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 19488 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 19489 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 19490 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 19491 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 19492 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 19493 % \CleaningF (marvosym)
 19494 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
 19495 % \CleaningFF (marvosym)
 19496 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
 19497 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle

19498 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 19499 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 19500 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 19501 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 19502 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 19503 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 19504 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 19505 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 19506 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 19507 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 19508 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 19509 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 19510 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 19511 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 19512 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 19513 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 19514 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 19515 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 19516 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 19517 % \CleaningP (marvosym)
 19518 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
 19519 % \CleaningPP (marvosym)
 19520 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
 19521 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 19522 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19523 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19524 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19525 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19526 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19527 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19528 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19529 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19530 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19531 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19532 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19533 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19534 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19535 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19536 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19537 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19538 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19539 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19540 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19541 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19542 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19543 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19544 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19545 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19546 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19547 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19548 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19549 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19550 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19551 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19552 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19553 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19554 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6

19555 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19556 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19557 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19558 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19559 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19560 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19561 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19562 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19563 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19564 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19565 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19566 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19567 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19568 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19569 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19570 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19571 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19572 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19573 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19574 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19575 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19576 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19577 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19578 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 19579 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19580 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19581 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19582 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19583 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19584 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19585 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19586 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19587 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19588 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19589 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19590 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19591 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19592 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19593 % U+24EA CIRCLED DIGIT ZERO
 19594 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19595 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19596 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19597 %* \textCuttingLine -> \Kutline (marvosym)
 19598 %* \textCuttingLine -> \CutLine (marvosym)
 19599 %* \textCuttingLine -> \Cutline (marvosym)

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

19600 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19601 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19602 %* \textUParrow -> \MoveUp (marvosym)
 19603 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19604 % \bigtriangleup (LaTeX)
 19605 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19606 %* \textbigtriangleup -> \APLup (wasysym)

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19607 %* \textbigtriangleup -> \Bleech (marvosym)
19608 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
19609 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
19610 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
tion);
19611 % whiterightpointingtriangle; \triangleright (LaTeX)
19612 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
19613 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
19614 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
19615 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
19616 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
19617 %* \textDOWNarrow -> \MoveDown (marvosym)
19618 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtrian-
gle;
19619 % \bigtriangledown (LaTeX)
19620 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
19621 %* \textbigtriangledown -> \APLdown (wasysym)
19622 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
19623 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
19624 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
striction);
19625 % whiteleftpointingtriangle; \triangleleft (LaTeX)
19626 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
19627 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)
19628 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19629 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19630 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19631 %* \textdiamond -> \Diamond (wasysym)
19632 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19633 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19634 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19635 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19636 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19637 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19638 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19639 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19640 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19641 % \boxbar (stmaryrd)
19642 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19643 % U+25EF LARGE CIRCLE; largecircle
19644 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19645 %* \textbigcircle -> \varbigcirc (stmaryrd)
19646 %

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

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19647 % U+2601 CLOUD; \Cloud (ifsym)
19648 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19649 % U+2605 BLACK STAR; \FiveStar (bbding)
19650 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19651 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19652 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19653 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19654 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19655 %* \textPhone -> \Telefon (marvosym)
19656 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19657 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19658 %* \textboxempty -> \Box (wasysym)

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19659 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
 19660 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
 19661 %* \textCheckedbox -> \CheckedBox (marvosym)
 19662 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
 19663 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
 19664 %* \textCrossedbox -> \XBox (wasysym)
 19665 %* \textCrossedbox -> \CrossedBox (marvosym)
 19666 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
 19667 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
 19668 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bding)
 19669 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
 19670 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bding)
 19671 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
 19672 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bding)
 19673 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
 19674 %* \textHandLeft -> \rightpointleft (fourier)
 19675 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bding)
 19676 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
 19677 %* \textHandRight -> \leftpointright (fourier)
 19678 %* \textHandRight -> \PointingHand (marvosym)
 19679 %* \textHandRight -> \Pointinghand (marvosym)
 19680 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
 19681 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
 19682 %* \textRadioactivity -> \Radiation (ifsym)
 19683 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
 19684 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
 19685 % U+2625 ANKH; \Ankh (marvosym)
 19686 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
 19687 % U+262F YIN YANG; \YinYang (marvosym)
 19688 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
 19689 %* \textYinYang -> \Yinyang (marvosym)
 19690 %* \textYinYang -> \YingYang (marvosym)
 19691 %* \textYinYang -> \Yingyang (marvosym)
 19692 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
 19693 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
 19694 %* \textfrownie -> \Frowny (marvosym)
 19695 % U+263A WHITE SMILING FACE; \smiley (wasysym)
 19696 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
 19697 %* \textsmiley -> \Smiley (marvosym)
 19698 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
 19699 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
 19700 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
 19701 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
 19702 %* \textsun -> \Sun (marvosym)
 19703 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
 19704 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
 19705 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
 19706 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
 19707 % U+263F MERCURY; \mercury (wasysym)
 19708 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
 19709 %* \textmercury -> \Mercury (marvosym)
 19710 % U+2640 FEMALE SIGN; female; \female (wasysym)
 19711 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
 19712 %* \textPUfemale -> \textfemale (tipx)
 19713 %* \textPUfemale -> \female (wasysym)
 19714 %* \textPUfemale -> \venus (wasysym)
 19715 %* \textPUfemale -> \Venus (marvosym)

19716 %* \textPUfemale -> \Female (marvosym)
19717 % U+2641 EARTH; \earth (wasysym)
19718 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19719 %* \textearth -> \Earth (marvosym)
19720 % U+2642 MALE SIGN; \male, mars; \male (wasysym)
19721 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19722 %* \textmale -> \mars (wasysym)
19723 %* \textmale -> \Mars (marvosym)
19724 %* \textmale -> \Male (marvosym)
19725 % U+2643 JUPITER; \jupiter (wasysym)
19726 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19727 %* \textjupiter -> \Jupiter (marvosym)
19728 % U+2644 SATURN; \saturn (wasysym)
19729 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19730 %* \textsaturn -> \Saturn (marvosym)
19731 % U+2645 URANUS; \uranus (wasysym)
19732 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19733 %* \texturanus -> \Uranus (marvosym)
19734 % U+2646 NEPTUNE; \neptune (wasysym)
19735 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19736 %* \textneptune -> \Neptune (marvosym)
19737 % U+2647 PLUTO; \pluto (wasysym)
19738 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19739 %* \textpluto -> \Pluto (marvosym)
19740 % U+2648 ARIES; \aries (wasysym)
19741 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
19742 %* \textaries -> \Aries (marvosym)
19743 % U+2649 TAURUS; \taurus (wasysym)
19744 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
19745 %* \texttaurus -> \Taurus (marvosym)
19746 % U+264A GEMINI; \gemini (wasysym)
19747 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
19748 %* \textgemini -> \Gemini (marvosym)
19749 % U+264B CANCER; \cancer (wasysym)
19750 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
19751 %* \textcancer -> \Cancer (marvosym)
19752 % U+264C LEO; \leo (wasysym)
19753 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
19754 %* \textleo -> \Leo (marvosym)
19755 % U+264D VIRGO; \virgo (wasysym)
19756 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
19757 %* \textvirgo -> \Virgo (marvosym)
19758 % U+264E LIBRA; \libra (wasysym)
19759 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
19760 %* \textlibra -> \Libra (marvosym)
19761 % U+264F SCORPIO; \scorpio (wasysym)
19762 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
19763 %* \textscorpio -> \Scorpio (marvosym)
19764 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
19765 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
19766 %* \textsagittarius -> \Sagittarius (marvosym)
19767 % U+2651 CAPRICORN; \capricornus (wasysym)
19768 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
19769 %* \textcapricornus -> \Capricorn (marvosym)
19770 % U+2652 AQUARIUS; \aquarius (wasysym)
19771 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
19772 %* \textaquarius -> \Aquarius (marvosym)

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19773 % U+2653 PISCES; \pisces (wasysym)
19774 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
19775 %* \textpisces -> \Pisces (marvosym)
19776 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
19777 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
19778 %* \textspadesuitblack -> \spadesuit (MnSymbol)
19779 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
19780 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
19781 %* \textheartsuitwhite -> \Heart (marvosym)
19782 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
19783 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
19784 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
19785 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
19786 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
19787 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
19788 %* \textclubsuitblack -> \clubsuit (MnSymbol)
19789 % U+2664 WHITE SPADE SUIT; spadesuitwhite
19790 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
19791 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
19792 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
19793 % U+2666 BLACK DIAMOND SUIT; diamond
19794 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
19795 % U+2667 WHITE CLUB SUIT; clubsuitwhite
19796 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667
19797 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
19798 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
19799 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
19800 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
19801 %* \textmusicalnote -> \eighthnote (wasysym, arev)
19802 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
19803 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
19804 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
      note (arev)
19805 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
19806 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
19807 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
19808 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
19809 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
19810 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
19811 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
19812 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
19813 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
19814 %* \textrecycle -> \Recycling (marvosym)
19815 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
19816 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
19817 % U+2691 BLACK FLAG; \Flag (ifsym)
19818 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
19819 %* \textFlag -> \VarFlag (ifsym)
19820 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
19821 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
19822 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
19823 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
19824 %* \textdsmilitary -> \textxswup (fourier)
19825 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
19826 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
19827 % U+2696 SCALES; \dsjuridical (dictsym)
19828 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696

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19829 % U+2697 ALEMBIC; \dschemical (dictsym)
 19830 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19831 % U+2698 FLOWER; \dsbiological (dictsym)
 19832 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19833 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19834 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19835 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19836 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19837 % U+26A0 WARNING SIGN; \danger (fourier)
 19838 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19839 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19840 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19841 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19842 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19843 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (marvosym)
 19844 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19845 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19846 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19847 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19848 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19849 % U+26AD MARRIAGE SYMBOL
 19850 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19851 % U+26AE DIVORCE SYMBOL
 19852 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19853 % U+26B2 NEUTER; \textuncrfemale (tipx)
 19854 \DeclareTextCommand{\textPUuncrfemale}{PU}{\9046\262}% U+26B2
 19855 %* \textPUuncrfemale -> \textuncrfemale (tipx)
 19856 % U+26B9 SEXTILE; \hexstar (wasysym)
 19857 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19858 % U+26BD SOCCER BALL; \Football (marvosym)
 19859 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19860 %* \textSoccerBall -> \Football (marvosym)
 19861 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19862 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19863 % U+26C6 RAIN; \Rain (ifsym)
 19864 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19865 % U+26D4 NO ENTRY; \noway (fourier)
 19866 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19867 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19868 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19869 % U+26FA TENT; \Tent (ifsym)
 19870 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19871 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bbding)
 19872 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19873 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19874 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19875 % U+2702 BLACK SCISSORS; \ScissorRight (bbding)
 19876 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19877 %* \textScissorRight -> \RightScissors (marvosym)
 19878 %* \textScissorRight -> \Leftscissors (marvosym)
 19879 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bbding)
 19880 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19881 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bbding)
 19882 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704

19883 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 19884 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19885 % U+2707 TAPE DRIVE; \Tape (bding)
 19886 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19887 % U+2708 AIRPLANE; \Plane (bding)
 19888 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19889 % U+2709 ENVELOPE; \Envelope (bding),
 19890 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19891 %* \textEnvelope -> \Letter (marvosym)
 19892 % U+270C VICTORY HAND; \Peace (bding)
 19893 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19894 % U+270D WRITING HAND; \WritingHand (marvosym)
 19895 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19896 %* \textWritingHand -> \Writinghand (marvosym)
 19897 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19898 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19899 % U+270F PENCIL; \PencilRight (bding)
 19900 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19901 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19902 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19903 % U+2711 WHITE NIB; \NibRight (bding)
 19904 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19905 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19906 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712
 19907 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19908 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19909 %* \textCheckmark -> \checkmark (MnSymbol)
 19910 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19911 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19912 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19913 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19914 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19915 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19916 % U+2717 BALLOT X; \XSolidBrush (bding)
 19917 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19918 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19919 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19920 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19921 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19922 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19923 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19924 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19925 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19926 % U+271D LATIN CROSS; \Cross (bding)
 19927 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19928 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19929 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19930 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19931 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19932 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19933 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19934 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19935 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19936 %* \textDavidStar -> \davidstar (wasysym)
 19937 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19938 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19939 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)

19940 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19941 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (b
 dding)
 19942 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19943 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (b
 bding)
 19944 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19945 % U+2726 BLACK FOUR POINTED STAR; \FourStar (b
 bding)
 19946 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19947 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (b
 bding)
 19948 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19949 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (b
 bding)
 19950 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19951 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (b
 bding)
 19952 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19953 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (b
 bding)
 19954 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19955 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (b
 bding)
 19956 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19957 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (b
 bding)
 19958 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19959 % U+272F PINWHEEL STAR; \FiveStarConvex (b
 bding)
 19960 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19961 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (b
 bding)
 19962 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730
 19963 % U+2731 HEAVY ASTERISK; \AsteriskBold (b
 bding)
 19964 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19965 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (b
 bding)
 19966 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19967 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (b
 bding)
 19968 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19969 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (b
 bding)
 19970 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19971 % U+2736 SIX POINTED BLACK STAR; \SixStar (b
 bding)
 19972 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 19973 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (b
 b
 ding)
 19974 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 19975 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \Eight
 StarBold (b
 bding)
 19976 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 19977 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (b
 bding)
 19978 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19979 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (b
 bding)
 19980 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19981 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (b
 b
 ding)
 19982 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19983 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19984 % \SixFlowerOpenCenter (b
 bding)
 19985 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19986 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (b
 bding)
 19987 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19988 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAl
 ternate (b
 bding)
 19989 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19990 % U+273F BLACK FLORETTE; \FiveFlowerPetal (b
 bding)
 19991 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F

19992 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19993 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19994 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlow-
 erPetal (bding)
 19995 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19996 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \Sunshi-
 neOpenCircled (bding)
 19997 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19998 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlow-
 erAltPetal (bding)
 19999 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 20000 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 20001 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 20002 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 20003 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 20004 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 20005 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 20006 % U+2747 SPARKLE; \Sparkle (bding)
 20007 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 20008 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 20009 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 20010 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 20011 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 20012 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20013 % \EightFlowerPetalRemoved (bding)
 20014 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 20015 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 20016 % \EightAsterisk (bding)
 20017 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20018 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20019 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20020 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20021 % \SquareShadowBottomRight (bding)
 20022 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20023 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20024 % \SquareShadowTopRight (bding)
 20025 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 20026 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20027 % \SquareCastShadowBottomRight (bding)
 20028 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20029 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20030 % \SquareCastShadowTopRight (bding)
 20031 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20032 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bb-
 ding)
 20033 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20034 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20035 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20036 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20037 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20038 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20039 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

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

20040 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20041 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20042 % \notperp (mathabx)

20043 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20044 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20045 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20046 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20047 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20048 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20049 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20050 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20051 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20052 %* \textlbrackdbl -> \llbracket (stmaryrd)
 20053 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20054 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20055 %* \textrbrackdbl -> \rrbracket (stmaryrd)

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

20056 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20057 % \circlearrowleft (AmS)
 20058 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20059 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20060 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20061 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20062 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20063 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20064 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6
 20065 % U+27F7 LONG LEFT RIGHT ARROW; \longleftrightarrow (AmS)
 20066 \DeclareTextCommand{\textlongleftrightarrow}{PU}{\9047\367}%* U+27F7
 20067 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 20068 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20069 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \longrightarrow (AmS)
 20070 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20071 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longleftrightarrow (AmS)
 20072 \DeclareTextCommand{\textLongleftrightarrow}{PU}{\9047\372}%* U+27FA
 20073 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20074 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20075 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmaps-
 from (stmaryrd)
 20076 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20077 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmap-
 sto (stmaryrd)
 20078 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

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

20079 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSym-
 bol)
 20080 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20081 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSym-
 bol)
 20082 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20083 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 20084 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 20085 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknearrow (MnSymbol)
 20086 \DeclareTextCommand{\textrhooknearrow}{PU}{\9051\044}%* U+2924
 20087 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 20088 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20089 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 20090 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20091 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)

20092 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 20093 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 20094 % \rcurvearrowne (MnSymbol)
 20095 \DeclareTextCommand{\texttrcurvearrowne}{PU}{\9051\064}%* U+2934
 20096 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 WARDS;
 20097 % \lcurvearrowse (MnSymbol)
 20098 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 20099 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 WARDS;
 20100 % \lcurvearrowsw (MnSymbol)
 20101 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 20102 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 WARDS;
 20103 % \rcurvearrowse (MnSymbol)
 20104 \DeclareTextCommand{\texttrcurvearrowse}{PU}{\9051\067}%* U+2937
 20105 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 Symbol)
 20106 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 20107 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 20108 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 20109 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 20110 % \rcurvearrowdown (MnSymbol)
 20111 \DeclareTextCommand{\texttrcurvearrowdown}{PU}{\9051\071}%* U+2939
 20112 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
 20113 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
 20114 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSym-
 bol)
 20115 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
 20116 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 20117 % \rcurvearrowright (MnSymbol)
 20118 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
 20119 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrighthar-
 poon (mathabx)
 20120 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 20121 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightlefthar-
 poon (mathabx)
 20122 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 20123 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 20124 % \updownharpoonrightleft (MnSymbol)
 20125 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 20126 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 20127 % \updownharpoonleftright (MnSymbol)
 20128 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 20129 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 20130 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 20131 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 20132 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 20133 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 20134 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 20135 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 WARDS HARPOON
 20136 % WITH BARB DOWN; \rightrightarpoons (mathabx)
 20137 \DeclareTextCommand{\textrightarpoons}{PU}{\9051\144}%* U+2964
 20138 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20139 % WITH BARB RIGHT; \downdownharpoons (mathabx)

20140 \DeclareTextCommand{\textdownharpoons}{PU}{\9051\145}%* U+2965
 20141 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20142 % \leftbarharpoon (mathabx)
 20143 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20144 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20145 % LONG DASH; \barleftharpoon (mathabx)
 20146 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20147 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20148 % LONG DASH; \rightbarharpoon (mathabx)
 20149 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20150 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20151 % LONG DASH; \barrightharpoon (mathabx)
 20152 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20153 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 WARDS HARPOON
 20154 % WITH BARB RIGHT; \updownharpoons (mathabx)
 20155 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 20156 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 WARDS HARPOON
 20157 % WITH BARB RIGHT; \downupharpoons (mathabx)
 20158 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 20159 % U+297F DOWN FISH TAIL
 20160 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

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

20161 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \lparenthesis (stmaryrd)
 20162 \DeclareTextCommand{\textlparenthesis}{PU}{\9051\207}%* U+2987
 20163 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 20164 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 20165 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 20166 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 20167 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 20168 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 20169 %* \textobar -> \textvarobar (stmaryrd)
 20170 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 20171 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 20172 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 20173 %* \textobslash -> \obackslash (mathabx)
 20174 %* \textobslash -> \varobslash (stmaryrd)
 20175 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 20176 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 20177 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 20178 %* \textobot -> \odplus (ulsy)
 20179 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 20180 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 20181 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 20182 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 20183 %* \textolessthan -> \varolessthan (stmaryrd)
 20184 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 20185 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 20186 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 20187 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 20188 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 20189 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 20190 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 20191 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)

20192 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 20193 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 20194 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 20195 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 20196 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 20197 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 20198 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 20199 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 20200 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 20201 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 20202 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

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

20203 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 20204 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 20205 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 20206 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 20207 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 20208 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 20209 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 20210 % pxfonts, wasysym)
 20211 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 20212 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 20213 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F
 20214 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 20215 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 20216 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 20217 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 20218 %* \textminusdot -> \divdot (mathabx)
 20219 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 20220 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 20221 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 20222 % \dtimes (mathdesign)
 20223 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 20224 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20225 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20226 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20227 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20228 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20229 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20230 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20231 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20232 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20233 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20234 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20235 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20236 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20237 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20238 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20239 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 20240 %* \textdoublevee -> \merge (stmaryrd)
 20241 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20242 % \doublebarwedge (AmS)
 20243 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20244 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20245 % \veedoublebar (mahtabx)
 20246 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63

20247 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20248 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20249 % \neqdot (MnSymbol)
 20250 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20251 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20252 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20253 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20254 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20255 % \nleqslant (txfonts/pxfonts)
 20256 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20257 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20258 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 20259 % \ngeqslant (txfonts/pxfonts)
 20260 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20261 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20262 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20263 % \nlessapprox (txfonts/pxfonts)
 20264 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20265 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20266 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20267 % \ngtrapprox (txfonts/pxfonts)
 20268 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20269 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20270 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87
 20271 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20272 % \gneq (AmS)
 20273 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20274 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20275 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20276 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20277 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20278 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-
 20279 % \lesseqgtr (AmS)
 20280 \DeclareTextCommand{\textlesseqgtr}{PU}{\9052\213}%* U+2A8B
 20281 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-
 20282 % \gtreqless (AmS)
 20283 \DeclareTextCommand{\textgtreqless}{PU}{\9052\214}%* U+2A8C
 20284 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20285 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20286 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20287 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20288 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20289 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20290 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20291 \DeclareTextCommand{\textright slice}{PU}{\9052\247}%* U+2AA7
 20292 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-
 20293 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20294 % \npreceq (txfonts/pxfonts)
 20295 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20296 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-
 20297 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20298 % \nsucceq (txfonts/pxfonts)
 20299 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338

20300 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \prec-
 neq (mathabx)
 20301 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20302 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succ-
 neq (mathabx)
 20303 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20304 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20305 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20306 % \npreceqq (txfonts/pxfonts)
 20307 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20308 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20309 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20310 % \nsucceqq (txfonts/pxfonts)
 20311 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20312 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20313 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20314 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20315 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20316 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20317 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20318 % \nprecapprox (txfonts/pxfonts)
 20319 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20320 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20321 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20322 % \nsuccapprox (txfonts/pxfonts)
 20323 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338
 20324 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnap-
 prox (AmS)
 20325 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20326 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnap-
 prox (AmS)
 20327 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20328 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20329 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20330 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20331 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20332 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20333 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20334 % \nsupseteqq (mathabx)
 20335 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20336 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20337 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20338 %* \textdashV -> \leftVdash (MnSymbol)
 20339 % \ndashV (mathabx)
 20340 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20341 %* \textndashV -> \nleftVdash (MnSymbol)
 20342 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20343 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20344 %* \textDashv -> \leftmodels (MnSymbol)
 20345 % \nDashv (mathabx)
 20346 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20347 %* \textnDashv -> \nleftmodels (MnSymbol)
 20348 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20349 % \DashV (mathabx)
 20350 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20351 %* \textDashV -> \leftModels (MnSymbol)
 20352 % \nDashV (mathabx)

20353 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20354 %* \textnDashV -> \nleftModels (MnSymbol)
 20355 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20356 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20357 % \downmodels (MnSymbol)
 20358 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20359 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20360 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20361 % \nupmodels (MnSymbol)
 20362 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20363 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20364 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20365 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20366 % \interleave (stmaryrd)
 20367 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20368 % U+2AFD DOUBLE SOLIDUS OPERATOR; \slash (stmaryrd)
 20369 \DeclareTextCommand{\textslash}{PU}{\9052\375}%* U+2AFD
 20370 %* \textslash -> \varparallel (txfonts\pxfonts)

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

20371 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20372 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20373 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20374 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

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

20375 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20376 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

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

20377 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20378 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20379 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20380 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20381 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20382 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

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

20383 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20384 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20385 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20386 % \textdownstep (tipa)
 20387 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

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

20388 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20389 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20390 %* \textPUheng -> \textheng (tipx)
 20391 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \texthookfour (tipx)
 20392 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 20393 %* \textPULhookfour -> \texthookfour (tipx)
 20394 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20395 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20396 %* \textPUscf -> \textscf (tipx)
 20397 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
 20398 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20399 %* \textPUaolig -> \textaoilig (tipx)

20400 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20401 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20402 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20403 \DeclareTextCommand{\textcircumlowlow}{PU}{\9247\210}% U+A788

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

20404 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20405 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20406 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20407 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

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

20408 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20409 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20410 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20411 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20412 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20413 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20414 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20415 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20416 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20417 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20418 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20419 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20420 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20421 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D
 20422 %* \textfullnote -> \Ganz (harmony)
 20423 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20424 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20425 %* \texthalfnote -> \Halb (harmony)
 20426 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20427 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20428 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20429 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20430 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20431 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20432 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20433 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

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

20434 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20435 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20436 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20437 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20438 % U+1F468 MAN; \ManFace (marvosym)
 20439 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20440 % U+1F469 WOMAN; \WomanFace (marvosym)
 20441 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20442 %* \textWomanFace -> \Womanface (marvosym)
 20443 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20444 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20445 %* \textFax -> \Faxmachine (marvosym)
 20446 % U+1F525 FIRE; \Fire (ifsym)
 20447 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

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

20448 % U+1F6B2 BICYCLE; \Bicycle (marvosym)

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20449 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
20450 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
20451 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
20452 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
20453 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

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51.2.45 Miscellaneous

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20454 \DeclareTextCommand{\SS}{PU}{SS}%
20455 % \textcopyleft (textcomp)
20456 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
20457 % \ccnc (ccllicenses)
20458 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
20459 % \ccnd (ccllicenses)
20460 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
20461 % \ccsa (ccllicenses)
20462 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
20463 % \Info (marvosym, china2e)
20464 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
20465 % \CESign (marvosym)
20466 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
20467 %* \textCESign -> \CESign (marvosym)

```

51.2.46 Aliases

Aliases (german.sty)

```

20468 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
20469 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%
20470 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20471 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20472 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20473 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20474 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20475 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

```

Aliases (math names)

```

20476 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20477 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20478 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20479 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20480 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*
20481 \</puenc>

```

51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

20482 \< *puvnenc>
20483 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20484 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20485 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20486 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20487 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20488 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20489 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20490 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20491 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20492 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20493 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0

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20494 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF
 20495 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
 20496 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
 20497 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
 20498 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
 20499 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
 20500 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
 20501 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
 20502 \DeclareTextCompositeCommand{\`}{PU}{\abreve}{\9036\261}% U+1EB1
 20503 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
 20504 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
 20505 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
 20506 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
 20507 \DeclareTextCompositeCommand{\`}{PU}{\acircumflex}{\9036\247}% U+1EA7
 20508 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
 20509 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
 20510 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
 20511 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
 20512 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
 20513 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
 20514 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 20515 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
 20516 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
 20517 \DeclareTextCompositeCommand{\`}{PU}{\ecircumflex}{\9036\301}% U+1EC1
 20518 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
 20519 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5
 20520 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20521 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20522 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
 20523 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20524 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20525 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20526 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20527 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 20528 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20529 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20530 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20531 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20532 \DeclareTextCompositeCommand{\`}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20533 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20534 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20535 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20536 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20537 \DeclareTextCompositeCommand{\`}{PU}{\ohorn}{\9036\335}% U+1EDD
 20538 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20539 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20540 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20541 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20542 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 20543 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20544 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20545 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20546 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20547 \DeclareTextCompositeCommand{\`}{PU}{\uhorn}{\9036\353}% U+1EEB
 20548 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20549 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20550 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD

20551 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20552 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 20553 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20554 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20555 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20556 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20557 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 20558 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20559 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20560 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20561 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20562 \DeclareTextCompositeCommand{\`}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20563 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20564 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20565 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20566 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20567 \DeclareTextCompositeCommand{\`}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20568 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20569 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EAA
 20570 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20571 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20572 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
 20573 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20574 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20575 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20576 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6
 20577 \DeclareTextCompositeCommand{\`}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
 20578 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
 20579 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
 20580 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
 20581 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
 20582 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
 20583 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
 20584 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 20585 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
 20586 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
 20587 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
 20588 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
 20589 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
 20590 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
 20591 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
 20592 \DeclareTextCompositeCommand{\`}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
 20593 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
 20594 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
 20595 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
 20596 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
 20597 \DeclareTextCompositeCommand{\`}{PU}{\OHORN}{\9036\334}% U+1EDC
 20598 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
 20599 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
 20600 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
 20601 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
 20602 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
 20603 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
 20604 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 20605 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
 20606 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
 20607 \DeclareTextCompositeCommand{\`}{PU}{\UHORN}{\9036\352}% U+1EEA

```

20608 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20609 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20610 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20611 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20612 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
20613 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20614 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20615 </p>puvnc</p>

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20616 <*puarenc>
20617 % U+0621;afii57409;ARABIC LETTER HAMZA
20618 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20619 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20620 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20621 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20622 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20623 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20624 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20625 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20626 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20627 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20628 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626
20629 % U+0627;afii57415;ARABIC LETTER ALEF
20630 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
20631 % U+0628;afii57416;ARABIC LETTER BEH
20632 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
20633 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
20634 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
20635 % U+062A;afii57418;ARABIC LETTER TEH
20636 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
20637 % U+062B;afii57419;ARABIC LETTER THEH
20638 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
20639 % U+062C;afii57420;ARABIC LETTER JEEM
20640 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
20641 % U+062D;afii57421;ARABIC LETTER HAH
20642 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
20643 % U+062E;afii57422;ARABIC LETTER KHAH
20644 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
20645 % U+062F;afii57423;ARABIC LETTER DAL
20646 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
20647 % U+0630;afii57424;ARABIC LETTER THAL
20648 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
20649 % U+0631;afii57425;ARABIC LETTER REH
20650 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
20651 % U+0632;afii57426;ARABIC LETTER ZAIN
20652 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
20653 % U+0633;afii57427;ARABIC LETTER SEEN
20654 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
20655 % U+0634;afii57428;ARABIC LETTER SHEEN
20656 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
20657 % U+0635;afii57429;ARABIC LETTER SAD
20658 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
20659 % U+0636;afii57430;ARABIC LETTER DAD

```

20660 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20661 % U+0637;afii57431;ARABIC LETTER TAH
 20662 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20663 % U+0638;afii57432;ARABIC LETTER ZAH
 20664 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20665 % U+0639;afii57433;ARABIC LETTER AIN
 20666 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20667 % U+063A;afii57434;ARABIC LETTER GHAIN
 20668 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20669 % U+0640;afii57440;ARABIC TATWEEL
 20670 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20671 % U+0641;afii57441;ARABIC LETTER FEH
 20672 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20673 % U+0642;afii57442;ARABIC LETTER QAF
 20674 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20675 % U+0643;afii57443;ARABIC LETTER KAF
 20676 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20677 % U+0644;afii57444;ARABIC LETTER LAM
 20678 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20679 % U+0645;afii57445;ARABIC LETTER MEEM
 20680 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20681 % U+0646;afii57446;ARABIC LETTER NOON
 20682 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20683 % U+0647;afii57470;ARABIC LETTER HEH
 20684 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20685 % U+0648;afii57448;ARABIC LETTER WAW
 20686 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20687 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20688 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20689 % U+064A;afii57450;ARABIC LETTER YEH
 20690 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20691 % U+064B;afii57451;ARABIC FATHATAN
 20692 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20693 % U+064C;afii57452;ARABIC DAMMATAN
 20694 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20695 % U+064D;afii57453;ARABIC KASRATAN
 20696 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20697 % U+064E;afii57454;ARABIC FATHA
 20698 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20699 % U+064F;afii57455;ARABIC DAMMA
 20700 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20701 % U+0650;afii57456;ARABIC KASRA
 20702 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20703 % U+0651;afii57457;ARABIC SHADDA
 20704 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20705 % U+0652;afii57458;ARABIC SUKUN
 20706 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20707 % U+067E ARABIC LETTER PEH; afii57506
 20708 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20709 % U+0686 ARABIC LETTER TCHEH; afii57507
 20710 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20711 % U+0698 ARABIC LETTER JEH; afii57508
 20712 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20713 % U+06A9 ARABIC LETTER KEHEH
 20714 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9

20715 % U+06AF ARABIC LETTER GAF; afi57509
 20716 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20717 % U+06CC ARABIC LETTER FARSI YEH
 20718 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20719 % U+200C ZERO WIDTH NON-JOINER; afi61664
 20720 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20721 % U+200D ZERO WIDTH JOINER; afi301
 20722 \DeclareTextCommand{\noboundary}{PU}{\9040\015}% U+200D

 20723 (/puarenc)

 20724 (*psdextra)
 20725 \Hy@VersionCheck{psdextra.def}
 20726 \newcommand*{\psdmapshortnames}{%
 20727 \let\MVPlus\textMVPlus
 20728 \let\MVComma\textMVComma
 20729 \let\MVMinus\textMVMinus
 20730 \let\MVPeriod\textMVPeriod
 20731 \let\MVDivision\textMVDivision
 20732 \let\MVZero\textMVZero
 20733 \let\MVOne\textMVOne
 20734 \let\MVTwo\textMVTwo
 20735 \let\MVThree\textMVThree
 20736 \let\MVFour\textMVFour
 20737 \let\MVFive\textMVFive
 20738 \let\MVSix\textMVSix
 20739 \let\MVSeven\textMVSeven
 20740 \let\MVEight\textMVEight
 20741 \let\MVNine\textMVNine
 20742 \let\MVAt\textMVAt
 20743 \let\copyright\textcopyright
 20744 \let\twosuperior\texttwosuperior
 20745 \let\threesuperior\textthreesuperior
 20746 \let\onesuperior\textonesuperior
 20747 \let\Thorn\textThorn
 20748 \let\thorn\textthorn
 20749 \let\hbar\texthbar
 20750 \let\hausaB\texthausaB
 20751 \let\hausaD\texthausaD
 20752 \let\hausaK\texthausaK
 20753 \let\barl\textbarl
 20754 \let\inve\textinve
 20755 \let\slashc\textslashc
 20756 \let\scripta\textscripta
 20757 \let\openo\textopeno
 20758 \let\rtaild\textrtaild
 20759 \let\reve\textreve
 20760 \let\schwa\textschwa
 20761 \let\niepsilon\textniepsilon
 20762 \let\revepsilon\textrevepsilon
 20763 \let\rhookrepsilon\texthookrepsilon
 20764 \let\scriptg\textscriptg
 20765 \let\scg\textscg
 20766 \let\ipagamma\textipagamma
 20767 \let\babygamma\textbabygamma
 20768 \let\bari\textbari
 20769 \let\niiota\textniiota
 20770 \let\sci\textsci

20771 \let\scn\textscn
 20772 \let\niphi\textniphi
 20773 \let\longlegr\textlonglegr
 20774 \let\scr\textscr
 20775 \let\invscr\textinvscr
 20776 \let\esh\textesh
 20777 \let\baru\textbaru
 20778 \let\niupsilon\textniupsilon
 20779 \let\scriptv\textscriptv
 20780 \let\turnv\textturnv
 20781 \let\turnw\textturnw
 20782 \let\turny\textturny
 20783 \let\scy\textscy
 20784 \let\yogh\textyogh
 20785 \let\glotstop\textglotstop
 20786 \let\revglotstop\textrevglotstop
 20787 \let\invglotstop\textinvglotstop
 20788 \let\Gamma\textGamma
 20789 \let\Delta\textDelta
 20790 \let\Theta\textTheta
 20791 \let\Lambda\textLambda
 20792 \let\Xi\textXi
 20793 \let\Pi\textPi
 20794 \let\Sigma\textSigma
 20795 \let\Upsilon\textUpsilon
 20796 \let\Phi\textPhi
 20797 \let\Psi\textPsi
 20798 \let\Omega\textOmega
 20799 \let\alpha\textalpha
 20800 \let\beta\textbeta
 20801 \let\gamma\textgamma
 20802 \let\delta\textdelta
 20803 \let\epsilon\textepsilon
 20804 \let\zeta\textzeta
 20805 \let\eta\texteta
 20806 \let\theta\texttheta
 20807 \let\iota\textiota
 20808 \let\kappa\textkappa
 20809 \let\lambda\textlambda
 20810 \let\mu\textmu
 20811 \let\nu\textnu
 20812 \let\xi\textxi
 20813 \let\pi\textpi
 20814 \let\rho\rho
 20815 \let\varsigma\textvarsigma
 20816 \let\sigma\textsigma
 20817 \let\tau\texttau
 20818 \let\upsilon\textupsilon
 20819 \let\phi\textphi
 20820 \let\chi\textchi
 20821 \let\psi\textpsi
 20822 \let\omega\textomega
 20823 \let\scd\textscd
 20824 \let\scu\textscu
 20825 \let\iinferior\textiinferior
 20826 \let\rinferior\textrinferior
 20827 \let\uinferior\textuinferior

20828 `\let\vinferior\textvinferior`
 20829 `\let\betainferior\textbetainferior`
 20830 `\let\gammainferior\textgammainferior`
 20831 `\let\rhoinferior\textrhoinferior`
 20832 `\let\phiinferior\textphiinferior`
 20833 `\let\chiinferior\textchiinferior`
 20834 `\let\barsci\textbarsci`
 20835 `\let\barp\textbarp`
 20836 `\let\barscu\textbarscu`
 20837 `\let\htrtaild\texthtrtaild`
 20838 `\let\dagger\textdagger`
 20839 `\let\bullet\textbullet`
 20840 `\let\hdotfor\texthdotfor`
 20841 `\let\prime\textprime`
 20842 `\let\second\textsecond`
 20843 `\let\third\textthird`
 20844 `\let\backprime\textbackprime`
 20845 `\let\lefttherefore\textlefttherefore`
 20846 `\let\fourth\textfourth`
 20847 `\let\diamonddots\textdiamonddots`
 20848 `\let\zerosuperior\textzerosuperior`
 20849 `\let\isuperior\textisuperior`
 20850 `\let\foursuperior\textfoursuperior`
 20851 `\let\fivesuperior\textfivesuperior`
 20852 `\let\sixsuperior\textsixsuperior`
 20853 `\let\sevensuperior\textsevensuperior`
 20854 `\let\eightsuperior\texteightsuperior`
 20855 `\let\ninesuperior\textninesuperior`
 20856 `\let\plussuperior\textplussuperior`
 20857 `\let\minussuperior\textminussuperior`
 20858 `\let\equalsuperior\textequalsuperior`
 20859 `\let\parenleftsuperior\textparenleftsuperior`
 20860 `\let\parenrightsuperior\textparenrightsuperior`
 20861 `\let\nsuperior\textnsuperior`
 20862 `\let\zeroinferior\textzeroinferior`
 20863 `\let\oneinferior\textoneinferior`
 20864 `\let\twoinferior\texttwoinferior`
 20865 `\let\threeinferior\textthreeinferior`
 20866 `\let\fourinferior\textfourinferior`
 20867 `\let\fiveinferior\textfiveinferior`
 20868 `\let\sixinferior\textsixinferior`
 20869 `\let\seveninferior\textseveninferior`
 20870 `\let\eightinferior\texteightinferior`
 20871 `\let\nineinferior\textnineinferior`
 20872 `\let\plusinferior\textplusinferior`
 20873 `\let\minusinferior\textminusinferior`
 20874 `\let\equalsinferior\textequalsinferior`
 20875 `\let\parenleftinferior\textparenleftinferior`
 20876 `\let\parenrightinferior\textparenrightinferior`
 20877 `\let\ainferior\textainferior`
 20878 `\let\einferior\texteinferior`
 20879 `\let\oinferior\textoinferior`
 20880 `\let\xinferior\textxinferior`
 20881 `\let\schwainferior\textschwainferior`
 20882 `\let\hinferior\texthinferior`
 20883 `\let\kinferior\textkinferior`
 20884 `\let\linferior\textlinferior`

20885 \let\minferior\textminferior
 20886 \let\ninferior\textninferior
 20887 \let\pinferior\textpinferior
 20888 \let\sinferior\textsinferior
 20889 \let\tinferior\texttinferior
 20890 \let\Deleatur\textDeleatur
 20891 \let\hslash\texthslash
 20892 \let\Im\textIm
 20893 \let\ell\textell
 20894 \let\wp\textwp
 20895 \let\Re\textRe
 20896 \let\mho\textmho
 20897 \let\riota\textriota
 20898 \let\Finv\textFinv
 20899 \let\aleph\textaleph
 20900 \let\beth\textbeth
 20901 \let\gimel\textgimel
 20902 \let\daleth\textdaleth
 20903 \let\xfax\textfax
 20904 \let\Game\textGame
 20905 \let\leftarrow\textleftarrow
 20906 \let\uparrow\textuparrow
 20907 \let\rightarrow\textrightarrow
 20908 \let\downarrow\textdownarrow
 20909 \let\leftrightarrow\textleftrightarrow
 20910 \let\updownarrow\textupdownarrow
 20911 \let\nwarrow\textnwarrow
 20912 \let\nearrow\textnearrow
 20913 \let\searrow\textsearrow
 20914 \let\swarrow\textswarrow
 20915 \let\nleftarrow\textnleftarrow
 20916 \let\nrightarrow\textnrightarrow
 20917 \let\twoheadleftarrow\texttwoheadleftarrow
 20918 \let\ntwoheadleftarrow\textntwoheadleftarrow
 20919 \let\twoheaduparrow\texttwoheaduparrow
 20920 \let\twoheadrightarrow\texttwoheadrightarrow
 20921 \let\ntwoheadrightarrow\textntwoheadrightarrow
 20922 \let\twoheaddownarrow\texttwoheaddownarrow
 20923 \let\leftarrowtail\textleftarrowtail
 20924 \let\rightarrowtail\textrightarrowtail
 20925 \let\mapsto\textmapsto
 20926 \let\hookleftarrow\texthookleftarrow
 20927 \let\hookrightarrow\texthookrightarrow
 20928 \let\looparrowleft\textlooparrowleft
 20929 \let\looparrowright\textlooparrowright
 20930 \let\leftrightharpoonup\textleftrightharpoonup
 20931 \let\lightning\textlightning
 20932 \let\dlsh\textdlsh
 20933 \let\curvearrowleft\textcurvearrowleft
 20934 \let\curvearrowright\textcurvearrowright
 20935 \let\leftharpoonup\textleftharpoonup
 20936 \let\leftharpoondown\textleftharpoondown
 20937 \let\upharpoonright\textupharpoonright
 20938 \let\upharpoonleft\textupharpoonleft
 20939 \let\rightharpoonup\textrightharpoonup
 20940 \let\rightharpoondown\textrightharpoondown
 20941 \let\downharpoonright\textdownharpoonright

20942 $\backslash\text{downharpoonleft}$
 20943 $\backslash\text{rightleftarrows}$
 20944 $\backslash\text{updownarrows}$
 20945 $\backslash\text{leftrightharpoons}$
 20946 $\backslash\text{leftleftarrows}$
 20947 $\backslash\text{upuparrows}$
 20948 $\backslash\text{rightrightarrows}$
 20949 $\backslash\text{downdownarrows}$
 20950 $\backslash\text{leftrightharpoons}$
 20951 $\backslash\text{rightleftharpoons}$
 20952 $\backslash\text{nLeftarrow}$
 20953 $\backslash\text{nLeftrightarrow}$
 20954 $\backslash\text{nRrightarrow}$
 20955 $\backslash\text{Leftarrow}$
 20956 $\backslash\text{Uparrow}$
 20957 $\backslash\text{Rrightarrow}$
 20958 $\backslash\text{Downarrow}$
 20959 $\backslash\text{Leftrightarrow}$
 20960 $\backslash\text{Updownarrow}$
 20961 $\backslash\text{Nwarrow}$
 20962 $\backslash\text{Nearrow}$
 20963 $\backslash\text{Searrow}$
 20964 $\backslash\text{Swarrow}$
 20965 $\backslash\text{Lleftarrow}$
 20966 $\backslash\text{Rrightarrow}$
 20967 $\backslash\text{leftsquigarrow}$
 20968 $\backslash\text{rightsquigarrow}$
 20969 $\backslash\text{dashleftarrow}$
 20970 $\backslash\text{dasheduparrow}$
 20971 $\backslash\text{dashrightarrow}$
 20972 $\backslash\text{dasheddownarrow}$
 20973 $\backslash\text{pointer}$
 20974 $\backslash\text{downuparrows}$
 20975 $\backslash\text{leftarrowtriangle}$
 20976 $\backslash\text{rightarrowtriangle}$
 20977 $\backslash\text{leftrightarrowtriangle}$
 20978 $\backslash\text{forall}$
 20979 $\backslash\text{complement}$
 20980 $\backslash\text{partial}$
 20981 $\backslash\text{exists}$
 20982 $\backslash\text{nexists}$
 20983 $\backslash\text{emptyset}$
 20984 $\backslash\text{triangle}$
 20985 $\backslash\text{nabla}$
 20986 $\backslash\text{in}$
 20987 $\backslash\text{notin}$
 20988 $\backslash\text{smallin}$
 20989 $\backslash\text{ni}$
 20990 $\backslash\text{notowner}$
 20991 $\backslash\text{smallowns}$
 20992 $\backslash\text{prod}$
 20993 $\backslash\text{amalg}$
 20994 $\backslash\text{sum}$
 20995 $\backslash\text{mp}$
 20996 $\backslash\text{dotplus}$
 20997 $\backslash\text{Divides}$
 20998 $\backslash\text{DividesNot}$

20999 \let\setminus\textsetminus
 21000 \let\ast\textast
 21001 \let\circ\textcirc
 21002 \let\surd\textsurd
 21003 \let\propto\textpropto
 21004 \let\infty\textinfty
 21005 \let\angle\textangle
 21006 \let\measuredangle\textmeasuredangle
 21007 \let\sphericalangle\textsphericalangle
 21008 \let\mid\textmid
 21009 \let\nmid\textnmid
 21010 \let\parallel\textparallel
 21011 \let\nparallel\textnparallel
 21012 \let\wedge\textwedge
 21013 \let\owedge\textowedge
 21014 \let\vee\textvee
 21015 \let\ovee\textovee
 21016 \let\cap\textcap
 21017 \let\cup\textcup
 21018 \let\int\textint
 21019 \let\iint\textiint
 21020 \let\iiint\textiiint
 21021 \let\oint\textoint
 21022 \let\oiint\textoiint
 21023 \let\ointclockwise\textointclockwise
 21024 \let\ointctrlockwise\textointctrlockwise
 21025 \let\therefore\texttherefore
 21026 \let\because\textbecause
 21027 \let\vdots\textvdots
 21028 \let\squaredots\textsquaredots
 21029 \let\dotminus\textdotminus
 21030 \let\eqcolon\texteqcolon
 21031 \let\sim\textsim
 21032 \let\backsim\textbacksim
 21033 \let\nbacksim\textnbacksim
 21034 \let\wr\textwr
 21035 \let\sim\textsim
 21036 \let\eqsim\texteqsim
 21037 \let\neqsim\textneqsim
 21038 \let\simeq\textsimeq
 21039 \let\nsimeq\textnsimeq
 21040 \let\cong\textcong
 21041 \let\ncong\textncong
 21042 \let\approx\textapprox
 21043 \let\napprox\textnapprox
 21044 \let\approxeq\textapproxeq
 21045 \let\napproxeq\textnapproxeq
 21046 \let\triplesim\texttriplesim
 21047 \let\ntriplesim\textntriplesim
 21048 \let\backcong\textbackcong
 21049 \let\nbackcong\textnbackcong
 21050 \let\asymp\textasymp
 21051 \let\nasymp\textnasymp
 21052 \let\Bumpeq\textBumpeq
 21053 \let\NBumpeq\textNBumpeq
 21054 \let\bumpeq\textbumpeq
 21055 \let\NBumpeq\textNBumpeq

21056 \let\doteq\textdoteq
 21057 \let\ndoteq\textndoteq
 21058 \let\doteqdot\textdoteqdot
 21059 \let\ndoteq\textndoteq
 21060 \let\fallingdoteq\textfallingdoteq
 21061 \let\ngoingdoteq\textngoingdoteq
 21062 \let\risingdoteq\textrisingdoteq
 21063 \let\ngoingdoteq\textngoingdoteq
 21064 \let\colonequals\textcolonequals
 21065 \let\equalscolon\textequalscolon
 21066 \let\eqcirc\texteqcirc
 21067 \let\neqcirc\textneqcirc
 21068 \let\circeq\textcirceq
 21069 \let\ncirceq\textncirceq
 21070 \let\hateq\texthateq
 21071 \let\nhateq\textnhateq
 21072 \let\triangleeq\texttriangleeq
 21073 \let\neq\textneq
 21074 \let\ne\textne
 21075 \let\equiv\textequiv
 21076 \let\nequiv\textnequiv
 21077 \let\leq\textleq
 21078 \let\le\textle
 21079 \let\geq\textgeq
 21080 \let\ge\textge
 21081 \let\leqq\textleqq
 21082 \let\lneqq\textlneqq
 21083 \let\geqq\textgeqq
 21084 \let\ngeqq\textngeqq
 21085 \let\lneqq\textlneqq
 21086 \let\gneqq\textgneqq
 21087 \let\ll\textll
 21088 \let\nll\textnll
 21089 \let\gg\textgg
 21090 \let\ngg\textngg
 21091 \let\between\textbetween
 21092 \let\nless\textnless
 21093 \let\ngtr\textngtr
 21094 \let\lneq\textlneq
 21095 \let\ngeq\textngeq
 21096 \let\lesssim\textlesssim
 21097 \let\gtrsim\textgtrsim
 21098 \let\nlesssim\textnlesssim
 21099 \let\ngtrsim\textngtrsim
 21100 \let\lessgtr\textlessgtr
 21101 \let\gtrless\textgtrless
 21102 \let\ngtrless\textngtrless
 21103 \let\nlessgtr\textnlessgtr
 21104 \let\prec\textprec
 21105 \let\succ\textsucc
 21106 \let\preccurlyeq\textpreccurlyeq
 21107 \let\succcurlyeq\textsucccurlyeq
 21108 \let\prec\textprec
 21109 \let\prec\textprec
 21110 \let\succsim\textsuccsim
 21111 \let\nsuccsim\textnsuccsim
 21112 \let\prec\textprec

21113 \let\nsucc\textnsucc
 21114 \let\subset\textsubset
 21115 \let\supset\textsupset
 21116 \let\nsubset\textnssubset
 21117 \let\nsupset\textnsupset
 21118 \let\subsepeq\textsubsepeq
 21119 \let\supsepeq\textsupsepeq
 21120 \let\nsubsepeq\textnsubsepeq
 21121 \let\nsupsepeq\textnsupsepeq
 21122 \let\subsetneq\textsubsetneq
 21123 \let\supsetneq\textsupsetneq
 21124 \let\cupdot\textcupdot
 21125 \let\cupplus\textcupplus
 21126 \let\sqsubset\textsqsubset
 21127 \let\nsqsubset\textnsqsubset
 21128 \let\sqsupset\textsqsupset
 21129 \let\nsqsupset\textnsqsupset
 21130 \let\sqsubsepeq\textsqsubsepeq
 21131 \let\nsqsubsepeq\textnsqsubsepeq
 21132 \let\sqsupsepeq\textsqsupsepeq
 21133 \let\nsqsupsepeq\textnsqsupsepeq
 21134 \let\sqcap\textsqcap
 21135 \let\sqcup\textsqcup
 21136 \let\oplus\textoplus
 21137 \let\ominus\textominus
 21138 \let\otimes\textotimes
 21139 \let\oslash\textoslash
 21140 \let\odot\textodot
 21141 \let\circledcirc\textcircledcirc
 21142 \let\circledast\textcircledast
 21143 \let\circleddash\textcircleddash
 21144 \let\boxplus\textboxplus
 21145 \let\boxminus\textboxminus
 21146 \let\boxtimes\textboxtimes
 21147 \let\boxdot\textboxdot
 21148 \let\vdash\textvdash
 21149 \let\dashv\textdashv
 21150 \let\ndashv\textndashv
 21151 \let\top\texttop
 21152 \let\ndownvdash\textndownvdash
 21153 \let\bot\textbot
 21154 \let\nupvdash\textnupvdash
 21155 \let\vDash\textvDash
 21156 \let\Vdash\textVdash
 21157 \let\Vvdash\textVvdash
 21158 \let\NVdash\textNVdash
 21159 \let\VDash\textVDash
 21160 \let\Nvdash\textNvdash
 21161 \let\NVDash\textNVDash
 21162 \let\NVdash\textNVdash
 21163 \let\NVDash\textNVDash
 21164 \let\lhd\textlhd
 21165 \let\rhd\textrhd
 21166 \let\unlhd\textunlhd
 21167 \let\unrhd\textunrhd
 21168 \let\multimapdotbothA\textmultimapdotbothA
 21169 \let\multimapdotbothB\textmultimapdotbothB

21170 $\backslash\text{let}\backslash\text{multimap}\backslash\text{textmultimap}$
 21171 $\backslash\text{let}\backslash\text{veebar}\backslash\text{textveebar}$
 21172 $\backslash\text{let}\backslash\text{barwedge}\backslash\text{textbarwedge}$
 21173 $\backslash\text{let}\backslash\text{star}\backslash\text{textstar}$
 21174 $\backslash\text{let}\backslash\text{divideontimes}\backslash\text{textdivideontimes}$
 21175 $\backslash\text{let}\backslash\text{bowtie}\backslash\text{textbowtie}$
 21176 $\backslash\text{let}\backslash\text{ltimes}\backslash\text{textltimes}$
 21177 $\backslash\text{let}\backslash\text{rtimes}\backslash\text{textrtimes}$
 21178 $\backslash\text{let}\backslash\text{leftthreetimes}\backslash\text{textleftthreetimes}$
 21179 $\backslash\text{let}\backslash\text{rightthreetimes}\backslash\text{textrightthreetimes}$
 21180 $\backslash\text{let}\backslash\text{backsimeq}\backslash\text{textbacksimeq}$
 21181 $\backslash\text{let}\backslash\text{nbacksimeq}\backslash\text{textnbacksimeq}$
 21182 $\backslash\text{let}\backslash\text{curlyvee}\backslash\text{textcurlyvee}$
 21183 $\backslash\text{let}\backslash\text{curlywedge}\backslash\text{textcurlywedge}$
 21184 $\backslash\text{let}\backslash\text{Subset}\backslash\text{textSubset}$
 21185 $\backslash\text{let}\backslash\text{nSubset}\backslash\text{textnSubset}$
 21186 $\backslash\text{let}\backslash\text{Supset}\backslash\text{textSupset}$
 21187 $\backslash\text{let}\backslash\text{nSupset}\backslash\text{textnSupset}$
 21188 $\backslash\text{let}\backslash\text{Cap}\backslash\text{textCap}$
 21189 $\backslash\text{let}\backslash\text{Cup}\backslash\text{textCup}$
 21190 $\backslash\text{let}\backslash\text{pitchfork}\backslash\text{textpitchfork}$
 21191 $\backslash\text{let}\backslash\text{lessdot}\backslash\text{textlessdot}$
 21192 $\backslash\text{let}\backslash\text{gtrdot}\backslash\text{textgtrdot}$
 21193 $\backslash\text{let}\backslash\text{lll}\backslash\text{textlll}$
 21194 $\backslash\text{let}\backslash\text{ggg}\backslash\text{textggg}$
 21195 $\backslash\text{let}\backslash\text{lesseqgtr}\backslash\text{textlesseqgtr}$
 21196 $\backslash\text{let}\backslash\text{gtreqless}\backslash\text{textgtreqless}$
 21197 $\backslash\text{let}\backslash\text{curlyeqprec}\backslash\text{textcurlyeqprec}$
 21198 $\backslash\text{let}\backslash\text{ncurlyeqprec}\backslash\text{textncurlyeqprec}$
 21199 $\backslash\text{let}\backslash\text{curlyeqsucc}\backslash\text{textcurlyeqsucc}$
 21200 $\backslash\text{let}\backslash\text{ncurlyeqsucc}\backslash\text{textncurlyeqsucc}$
 21201 $\backslash\text{let}\backslash\text{npreccurlyeq}\backslash\text{textnpreccurlyeq}$
 21202 $\backslash\text{let}\backslash\text{nsucccurlyeq}\backslash\text{textnsucccurlyeq}$
 21203 $\backslash\text{let}\backslash\text{nqsubseteq}\backslash\text{textnqsubseteq}$
 21204 $\backslash\text{let}\backslash\text{nqsupseteq}\backslash\text{textnqsupseteq}$
 21205 $\backslash\text{let}\backslash\text{sqsubsetneq}\backslash\text{textsqssubsetneq}$
 21206 $\backslash\text{let}\backslash\text{sqsupsetneq}\backslash\text{textsqsupsetneq}$
 21207 $\backslash\text{let}\backslash\text{lnsim}\backslash\text{textlnsim}$
 21208 $\backslash\text{let}\backslash\text{gnsim}\backslash\text{textgnsim}$
 21209 $\backslash\text{let}\backslash\text{precnsim}\backslash\text{textprecnsim}$
 21210 $\backslash\text{let}\backslash\text{succnsim}\backslash\text{textsuccnsim}$
 21211 $\backslash\text{let}\backslash\text{ntriangleleft}\backslash\text{textntriangleleft}$
 21212 $\backslash\text{let}\backslash\text{ntriangleright}\backslash\text{textntriangleright}$
 21213 $\backslash\text{let}\backslash\text{ntrianglelefteq}\backslash\text{textntrianglelefteq}$
 21214 $\backslash\text{let}\backslash\text{ntrianglerighteq}\backslash\text{textntrianglerighteq}$
 21215 $\backslash\text{let}\backslash\text{vdots}\backslash\text{textvdots}$
 21216 $\backslash\text{let}\backslash\text{cdots}\backslash\text{textcdots}$
 21217 $\backslash\text{let}\backslash\text{udots}\backslash\text{textudots}$
 21218 $\backslash\text{let}\backslash\text{ddots}\backslash\text{tex addeddots}$
 21219 $\backslash\text{let}\backslash\text{barin}\backslash\text{textbarin}$
 21220 $\backslash\text{let}\backslash\text{diameter}\backslash\text{textdiameter}$
 21221 $\backslash\text{let}\backslash\text{backneg}\backslash\text{textbackneg}$
 21222 $\backslash\text{let}\backslash\text{wasylounge}\backslash\text{textwasylounge}$
 21223 $\backslash\text{let}\backslash\text{invbackneg}\backslash\text{textinvbackneg}$
 21224 $\backslash\text{let}\backslash\text{clock}\backslash\text{textclock}$
 21225 $\backslash\text{let}\backslash\text{ulcorner}\backslash\text{textulcorner}$
 21226 $\backslash\text{let}\backslash\text{urcorner}\backslash\text{texturcorner}$

21227 \let\llcorner\textllcorner
 21228 \let\lrcorner\textlrcorner
 21229 \let\frown\textfrown
 21230 \let\smile\textsmile
 21231 \let\Keyboard\textKeyboard
 21232 \let\langle\textlangle
 21233 \let\rangle\textrangle
 21234 \let\APLinv\textAPLinv
 21235 \let\Tumbler\textTumbler
 21236 \let\notslash\textnotslash
 21237 \let\notbackslash\textnotbackslash
 21238 \let\boxbackslash\textboxbackslash
 21239 \let\APLleftarrowbox\textAPLleftarrowbox
 21240 \let\APLrightarrowbox\textAPLrightarrowbox
 21241 \let\APLuparrowbox\textAPLuparrowbox
 21242 \let\APLdownarrowbox\textAPLdownarrowbox
 21243 \let\APLinput\textAPLinput
 21244 \let\Request\textRequest
 21245 \let\Beam\textBeam
 21246 \let\hexagon\texthexagon
 21247 \let\APLbox\textAPLbox
 21248 \let\ForwardToIndex\textForwardToIndex
 21249 \let\RewindToIndex\textRewindToIndex
 21250 \let\bbslash\textbbslash
 21251 \let\CircledA\textCircledA
 21252 \let\CleaningF\textCleaningF
 21253 \let\CleaningFF\textCleaningFF
 21254 \let\CleaningP\textCleaningP
 21255 \let\CleaningPP\textCleaningPP
 21256 \let\CuttingLine\textCuttingLine
 21257 \let\UParrow\textUParrow
 21258 \let\bigtriangleup\textbigtriangleup
 21259 \let\Forward\textForward
 21260 \let\triangleright\texttriangleright
 21261 \let\RHD\textRHD
 21262 \let\DOWNarrow\textDOWNarrow
 21263 \let\bigtriangledown\textbigtriangledown
 21264 \let\Rewind\textRewind
 21265 \let\triangleleft\texttriangleleft
 21266 \let\LHD\textLHD
 21267 \let\diamond\textdiamond
 21268 \let\lozenge\textlozenge
 21269 \let\LEFTCIRCLE\textLEFTCIRCLE
 21270 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21271 \let\openbullet\textopenbullet
 21272 \let\boxbar\textboxbar
 21273 \let\bigcircle\textbigcircle
 21274 \let\Cloud\textCloud
 21275 \let\FiveStar\textFiveStar
 21276 \let\FiveStarOpen\textFiveStarOpen
 21277 \let\Phone\textPhone
 21278 \let\boxempty\textboxempty
 21279 \let\Checkedbox\textCheckedbox
 21280 \let\Crossedbox\textCrossedbox
 21281 \let\Coffeecup\textCoffeecup
 21282 \let\HandCuffLeft\textHandCuffLeft
 21283 \let\HandCuffRight\textHandCuffRight

21284 \let\HandLeft\textHandLeft
 21285 \let\HandRight\textHandRight
 21286 \let\Radioactivity\textRadioactivity
 21287 \let\Biohazard\textBiohazard
 21288 \let\Ankh\textAnkh
 21289 \let\YinYang\textYinYang
 21290 \let\frownie\textfrownie
 21291 \let\smiley\textsmiley
 21292 \let\blacksmiley\textblacksmiley
 21293 \let\sun\textsun
 21294 \let\leftmoon\textleftmoon
 21295 \let\rightmoon\textrightmoon
 21296 \let\mercury\textmercury
 21297 \let\earth\textearth
 21298 \let\male\textmale
 21299 \let\jupiter\textjupiter
 21300 \let\saturn\textsaturn
 21301 \let\uranus\texturanus
 21302 \let\neptune\textneptune
 21303 \let\pluto\textpluto
 21304 \let\aries\textaries
 21305 \let\taurus\texttaurus
 21306 \let\gemini\textgemini
 21307 \let\cancer\textcancer
 21308 \let\leo\textleo
 21309 \let\virgo\textvirgo
 21310 \let\libra\textlibra
 21311 \let\scorpio\textscorpio
 21312 \let\sagittarius\textsagittarius
 21313 \let\capricornus\textcapricornus
 21314 \let\aquarius\textaquarius
 21315 \let\pisces\textpisces
 21316 \let\quaternote\textquaternote
 21317 \let\twonotes\texttwonotes
 21318 \let\sixteenthnote\textsixteenthnote
 21319 \let\flat\textflat
 21320 \let\natural\textnatural
 21321 \let\sharp\textsharp
 21322 \let\recycle\textrecycle
 21323 \let\Wheelchair\textWheelchair
 21324 \let\Flag\textFlag
 21325 \let\MineSign\textMineSign
 21326 \let\ds\textds
 21327 \let\dsmedical\textdsmedical
 21328 \let\dsjuridical\textdsjuridical
 21329 \let\dschemical\textdschemical
 21330 \let\dsbiological\textdsbiological
 21331 \let\dscommercial\textdscommercial
 21332 \let\manstar\textmanstar
 21333 \let\danger\textdanger
 21334 \let\FemaleFemale\textFemaleFemale
 21335 \let\MaleMale\textMaleMale
 21336 \let\FemaleMale\textFemaleMale
 21337 \let\Hermaphrodite\textHermaphrodite
 21338 \let\Neutral\textNeutral
 21339 \let\hexstar\texthexstar
 21340 \let\SunCloud\textSunCloud

21341 \let\Rain\textRain
 21342 \let\noway\textnoway
 21343 \let\Mountain\textMountain
 21344 \let\Tent\textTent
 21345 \let\ScissorRight\textScissorRight
 21346 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21347 \let\ScissorHollowRight\textScissorHollowRight
 21348 \let\PhoneHandset\textPhoneHandset
 21349 \let\Tape\textTape
 21350 \let\Plane\textPlane
 21351 \let\Envelope\textEnvelope
 21352 \let\Peace\textPeace
 21353 \let\WritingHand\textWritingHand
 21354 \let\PencilRightDown\textPencilRightDown
 21355 \let\PencilRight\textPencilRight
 21356 \let\PencilRightUp\textPencilRightUp
 21357 \let\NibRight\textNibRight
 21358 \let\NibSolidRight\textNibSolidRight
 21359 \let\Checkmark\textCheckmark
 21360 \let\CheckmarkBold\textCheckmarkBold
 21361 \let\XSolid\textXSolid
 21362 \let\XSolidBold\textXSolidBold
 21363 \let\XSolidBrush\textXSolidBrush
 21364 \let\PlusOutline\textPlusOutline
 21365 \let\Plus\textPlus
 21366 \let\PlusThinCenterOpen\textPlusThinCenterOpen
 21367 \let\PlusCenterOpen\textPlusCenterOpen
 21368 \let\Cross\textCross
 21369 \let\CrossOpenShadow\textCrossOpenShadow
 21370 \let\CrossOutline\textCrossOutline
 21371 \let\CrossMaltese\textCrossMaltese
 21372 \let\DavidStar\textDavidStar
 21373 \let\FourAsterisk\textFourAsterisk
 21374 \let\JackStar\textJackStar
 21375 \let\JackStarBold\textJackStarBold
 21376 \let\ClowerTips\textClowerTips
 21377 \let\FourStar\textFourStar
 21378 \let\FourStarOpen\textFourStarOpen
 21379 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21380 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21381 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21382 \let\FiveStarOutline\textFiveStarOutline
 21383 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21384 \let\FiveStarConvex\textFiveStarConvex
 21385 \let\FiveStarShadow\textFiveStarShadow
 21386 \let\AsteriskBold\textAsteriskBold
 21387 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21388 \let\EightStarTaper\textEightStarTaper
 21389 \let\EightStarConvex\textEightStarConvex
 21390 \let\SixStar\textSixStar
 21391 \let\EightStar\textEightStar
 21392 \let\EightStarBold\textEightStarBold
 21393 \let\TwelveStar\textTwelveStar
 21394 \let\SixteenStarLight\textSixteenStarLight
 21395 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21396 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21397 \let\Asterisk\textAsterisk

21398 \let\SixFlowerAlternate\textSixFlowerAlternate
 21399 \let\FiveFlowerPetal\textFiveFlowerPetal
 21400 \let\FiveFlowerOpen\textFiveFlowerOpen
 21401 \let\EightFlowerPetal\textEightFlowerPetal
 21402 \let\SunshineOpenCircled\textSunshineOpenCircled
 21403 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21404 \let\SnowflakeChevron\textSnowflakeChevron
 21405 \let\Snowflake\textSnowflake
 21406 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21407 \let\Sparkle\textSparkle
 21408 \let\SparkleBold\textSparkleBold
 21409 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21410 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21411 \let\EightAsterisk\textEightAsterisk
 21412 \let\CircleShadow\textCircleShadow
 21413 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21414 \let\SquareTopRight\textSquareTopRight
 21415 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21416 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21417 \let\DiamandSolid\textDiamandSolid
 21418 \let\RectangleThin\textRectangleThin
 21419 \let\Rectangle\textRectangle
 21420 \let\RectangleBold\textRectangleBold
 21421 \let\perp\textperp
 21422 \let\notperp\textnotperp
 21423 \let\veedot\textveedot
 21424 \let\wedgedot\textwedgedot
 21425 \let\leftspoon\textleftspoon
 21426 \let\lbrackdbl\textlbrackdbl
 21427 \let\rbrackdbl\textrbrackdbl
 21428 \let\circlearrowleft\textcirclearrowleft
 21429 \let\circlearrowright\textcirclearrowright
 21430 \let\longleftarrow\textlongleftarrow
 21431 \let\longrightarrow\textlongrightarrow
 21432 \let\longleftarrow\textlongleftarrow
 21433 \let\Longleftarrow\textLongleftarrow
 21434 \let\Longrightarrow\textLongrightarrow
 21435 \let\Longleftarrow\textLongleftarrow
 21436 \let\longmapsto\textlongmapsto
 21437 \let\Longmapsfrom\textLongmapsfrom
 21438 \let\Longmapsto\textLongmapsto
 21439 \let\nwsearrow\textnwsearrow
 21440 \let\neswarrow\textneswarrow
 21441 \let\lhooknwarrow\textlhooknwarrow
 21442 \let\rhooknearrow\texthooknearrow
 21443 \let\lhooksearrow\textlhooksearrow
 21444 \let\rhookswarrow\texthookswarrow
 21445 \let\leadsto\textleadsto
 21446 \let\rcurvearrowne\textrcurvearrowne
 21447 \let\lcurvearrowse\textlcurvearrowse
 21448 \let\lcurvearrowsw\textlcurvearrowsw
 21449 \let\rcurvearrowse\textrcurvearrowse
 21450 \let\lcurvearrowdown\textlcurvearrowdown
 21451 \let\rcurvearrowdown\textrcurvearrowdown
 21452 \let\rcurvearrowleft\textrcurvearrowleft
 21453 \let\rcurvearrowright\textrcurvearrowright
 21454 \let\lefttrightharpoon\textlefttrightharpoon

21455 `\let\rightleftharpoon\textrightleftharpoon`
 21456 `\let\updownharpoonrightleft\textupdownharpoonrightleft`
 21457 `\let\updownharpoonleftright\textupdownharpoonleftright`
 21458 `\let\leftleftharpoons\textleftleftharpoons`
 21459 `\let\upupharpoons\textupupharpoons`
 21460 `\let\righttrightharpoons\textrighttrightharpoons`
 21461 `\let\downdownharpoons\textdowndownharpoons`
 21462 `\let\leftbarharpoon\textleftbarharpoon`
 21463 `\let\barleftharpoon\textbarleftharpoon`
 21464 `\let\rightbarharpoon\textrightbarharpoon`
 21465 `\let\barriightharpoon\textbarriightharpoon`
 21466 `\let\updownharpoons\textupdownharpoons`
 21467 `\let\downupharpoons\textdownupharpoons`
 21468 `\let\moo\textmoo`
 21469 `\let\llparenthesis\textllparenthesis`
 21470 `\let\rrparenthesis\textrrparenthesis`
 21471 `\let\invdiameter\textinvdiameter`
 21472 `\let\obar\textobar`
 21473 `\let\obslash\textobslash`
 21474 `\let\obot\textobot`
 21475 `\let\NoChemicalCleaning\textNoChemicalCleaning`
 21476 `\let\olessthan\textolessthan`
 21477 `\let\ogreaterthan\textogreaterthan`
 21478 `\let\boxslash\textboxslash`
 21479 `\let\boxbslash\textboxbslash`
 21480 `\let\boxast\textboxast`
 21481 `\let\boxcircle\textboxcircle`
 21482 `\let\boxbox\textboxbox`
 21483 `\let\Valve\textValve`
 21484 `\let\multimapboth\textmultimapboth`
 21485 `\let\shuffle\textshuffle`
 21486 `\let\uplus\textuplus`
 21487 `\let\bigdoublewedge\textbigdoublewedge`
 21488 `\let\bigdoublevee\textbigdoublevee`
 21489 `\let\Join\textJoin`
 21490 `\let\fatsemi\textfatsemi`
 21491 `\let\cirplus\textcirplus`
 21492 `\let\minusdot\textminusdot`
 21493 `\let\dottimes\textdottimes`
 21494 `\let\dtimes\textdtimes`
 21495 `\let\odiv\textodiv`
 21496 `\let\invneg\textinvneg`
 21497 `\let\squdoublecap\textsqudoublecap`
 21498 `\let\capdot\textcapdot`
 21499 `\let\squdoublecup\textsqudoublecup`
 21500 `\let\doublewedge\textdoublewedge`
 21501 `\let\doublevee\textdoublevee`
 21502 `\let\doublebarwedge\textdoublebarwedge`
 21503 `\let\veedoublebar\textveedoublebar`
 21504 `\let\eqdot\texteqdot`
 21505 `\let\neqdot\textneqdot`
 21506 `\let\coloncolonequals\textcoloncolonequals`
 21507 `\let\leqslant\textleqslant`
 21508 `\let\neqslant\textneqslant`
 21509 `\let\geqslant\textgeqslant`
 21510 `\let\ngeqslant\textngeqslant`
 21511 `\let\lessapprox\textlessapprox`

21512 `\let\nlessapprox\textnlessapprox`
 21513 `\let\gtrapprox\textgtrapprox`
 21514 `\let\ngtrapprox\textngtrapprox`
 21515 `\let\lneq\textlneq`
 21516 `\let\gneq\textgneq`
 21517 `\let\lnapprox\textlnapprox`
 21518 `\let\gnapprox\textgnapprox`
 21519 `\let\lesseqqgtr\textlesseqqgtr`
 21520 `\let\gtreqqless\textgtreqqless`
 21521 `\let\eqslantless\texteqslantless`
 21522 `\let\eqslantgtr\texteqslantgtr`
 21523 `\let\leftslice\textleftslice`
 21524 `\let\rightslice\textright slice`
 21525 `\let\preceq\textpreceq`
 21526 `\let\npreceq\textnpreceq`
 21527 `\let\succeq\textsucceq`
 21528 `\let\nsucceq\textnsucceq`
 21529 `\let\precneq\textprecneq`
 21530 `\let\succneq\textsuccneq`
 21531 `\let\preceqq\textpreceqq`
 21532 `\let\npreceqq\textnpreceqq`
 21533 `\let\succeqq\textsucceqq`
 21534 `\let\nsucceqq\textnsucceqq`
 21535 `\let\precneqq\textprecneqq`
 21536 `\let\succneqq\textsuccneqq`
 21537 `\let\precapprox\textprecapprox`
 21538 `\let\nprecapprox\textnprecapprox`
 21539 `\let\succapprox\textsuccapprox`
 21540 `\let\nsuccapprox\textnsuccapprox`
 21541 `\let\precnapprox\textprecnapprox`
 21542 `\let\succnapprox\textsuccnapprox`
 21543 `\let\subseteqq\textsubseteqq`
 21544 `\let\nsubseteqq\textnsubseteqq`
 21545 `\let\supseteqq\textsupseteqq`
 21546 `\let\nsupseteqq\textnsupseteqq`
 21547 `\let\dashV\textdashV`
 21548 `\let\ndashV\textndashV`
 21549 `\let\Dashv\textDashv`
 21550 `\let\ndashv\textndashv`
 21551 `\let\DashV\textDashV`
 21552 `\let\ndashV\textndashV`
 21553 `\let\downmodels\textdownmodels`
 21554 `\let\ndownmodels\textndownmodels`
 21555 `\let\upmodels\textupmodels`
 21556 `\let\nupmodels\textnupmodels`
 21557 `\let\upspoon\textupspoon`
 21558 `\let\interleave\textinterleave`
 21559 `\let\slash\textslash`
 21560 `\let\pentagon\textpentagon`
 21561 `\let\varhexagon\textvarhexagon`
 21562 `\let\jinferior\textjinferior`
 21563 `\let\slashdiv\textslashdiv`
 21564 `\let\fivedots\textfivedots`
 21565 `\let\oo\textoo`
 21566 `\let\GaPa\textGaPa`
 21567 `\let\HaPa\textHaPa`
 21568 `\let\ViPa\textViPa`

21569 \let\AcPa\textAcPa
21570 \let\SePa\textSePa
21571 \let\ZwPa\textZwPa
21572 \let\fullnote\textfullnote
21573 \let\halfnote\texthalfnote
21574 \let\Vier\textVier
21575 \let\Acht\textAcht
21576 \let\Sech\textSech
21577 \let\Zwdr\textZwdr
21578 \let\Mundus\textMundus
21579 \let\Moon\textMoon
21580 \let\ManFace\textManFace
21581 \let\WomanFace\textWomanFace
21582 \let\Fax\textFax
21583 \let\Fire\textFire
21584 \let\Bicycle\textBicycle
21585 \let\Gentsroom\textGentsroom
21586 \let\Ladiesroom\textLadiesroom
21587 \let\ccnc\textccnc
21588 \let\ccsa\textccsa
21589 \let\Info\textInfo
21590 \let\CESign\textCESign
21591 \let\neg\textneg
21592 \let\times\texttimes
21593 \let\div\textdiv
21594 \let\pm\textpm
21595 \let\cdot\textcdot
21596 }% \psdmapshortnames
21597 \newcommand*{\psdaliasnames}{%
21598 \let\epsdice\HyPsd@DieFace
21599 \let\fcdice\HyPsd@DieFace
21600 \let\MoonPha\HyPsd@MoonPha
21601 \let\mathdollar\textdollar
21602 \let\EyesDollar\textdollar
21603 \let\binampersand\textampersand
21604 \let\with\textampersand
21605 \let\mathunderscore\textunderscore
21606 \let\textvertline\textbar
21607 \let\mathsterling\textsterling
21608 \let\pounds\textsterling
21609 \let\brokenvert\textbrokenbar
21610 \let\mathsection\textsection
21611 \let\S\textsection
21612 \let\mathparagraph\textparagraph
21613 \let\MultiplicationDot\textperiodcentered
21614 \let\Squaredot\textperiodcentered
21615 \let\vartimes\textmultiply
21616 \let\MVMultiplication\textmultiply
21617 \let\eth\dh
21618 \let\crossd\textcrd
21619 \let\textbard\textcrd
21620 \let\bard\textcrd
21621 \let\textcrh\texthbar
21622 \let\crossh\texthbar
21623 \let\planck\texthbar
21624 \let\eng\ng
21625 \let\engma\ng

21626 \let\crossb\textcrb
 21627 \let\textbarb\textcrb
 21628 \let\barb\textcrb
 21629 \let\Florin\textflorin
 21630 \let\hv\texthvlig
 21631 \let\hausak\texthtk
 21632 \let\crossnilambda\textcrlambda
 21633 \let\barlambda\textcrlambda
 21634 \let\lambdabar\textcrlambda
 21635 \let\lambdaslash\textcrlambda
 21636 \let\textnrleg\textPUnrleg
 21637 \let\textpipevar\textpipe
 21638 \let\textdoublepipevar\textdoublepipe
 21639 \let\textdoublebarpipevar\textdoublebarpipe
 21640 \let\textcrg\textgslash
 21641 \let\textdblig\textPUdblig
 21642 \let\textqplig\textPUqplig
 21643 \let\textcentoldstyle\textslashc
 21644 \let\textbarc\textslashc
 21645 \let\inva\textturna
 21646 \let\vara\textscripta
 21647 \let\invscripta\textturnscripta
 21648 \let\rotvara\textturnscripta
 21649 \let\hookb\texthtb
 21650 \let\hausab\texthtb
 21651 \let\varopeno\textopeno
 21652 \let\curlyc\textctc
 21653 \let\taild\textrtaild
 21654 \let\hookd\texthtd
 21655 \let\hausad\texthtd
 21656 \let\er\textrhooschwa
 21657 \let\epsi\textniepsilon
 21658 \let\hookreveysilon\textrhooschwa
 21659 \let\closedreveysilon\textcloserveysilon
 21660 \let\barj\textbardotlessj
 21661 \let\hookg\texthtg
 21662 \let\varg\textscriptg
 21663 \let\vod\textipagamma
 21664 \let\invh\textturnh
 21665 \let\udesc\textturnh
 21666 \let\hookh\texthth
 21667 \let\voicedh\texthth
 21668 \let\hookheng\texththeng
 21669 \let\ibar\textbari
 21670 \let\vari\textniota
 21671 \let\tildel\textltilde
 21672 \let\latfric\textbeltl
 21673 \let\taill\textrtail
 21674 \let\lz\textlyoghlig
 21675 \let\invm\textturnm
 21676 \let\rotm\textturnm
 21677 \let\legm\textturnmrleg
 21678 \let\labdentainas\textltailm
 21679 \let\emgma\textltailm
 21680 \let\nj\textltailn
 21681 \let\enya\textltailn
 21682 \let\tailn\textrtailn

21683 \let\closedniomega\textcloseomega
 21684 \let\varomega\textcloseomega
 21685 \let\invr\textturnr
 21686 \let\rotr\textturnr
 21687 \let\invlegr\textturnlonglegr
 21688 \let\tailinvr\textturnrrtail
 21689 \let\legr\textlonglegr
 21690 \let\tailr\textrtailr
 21691 \let\flapr\textfishhookr
 21692 \let\flap\textfishhookr
 21693 \let\tails\textrtails
 21694 \let\curlyesh\textctesh
 21695 \let\clickt\textturnt
 21696 \let\tailt\textrtailt
 21697 \let\ubar\textbaru
 21698 \let\rotOmega\textniupsilon
 21699 \let\invv\textturnv
 21700 \let\pwedge\textturnv
 21701 \let\invw\textturnw
 21702 \let\rotw\textturnw
 21703 \let\invy\textturny
 21704 \let\roty\textturny
 21705 \let\tailz\textrtailz
 21706 \let\curlyz\textctz
 21707 \let\curlyyogh\textctyogh
 21708 \let\ejective\textglotstop
 21709 \let\glottal\textglotstop
 21710 \let\reject\textrevglotstop
 21711 \let\clickc\textstretchc
 21712 \let\textstretchcvar\textstretchc
 21713 \let\clickb\textbullseye
 21714 \let\textObullseye\textbullseye
 21715 \let\textctjvar\textctj
 21716 \let\textturnsk\textturnk
 21717 \let\dz\textdzlig
 21718 \let\tesh\texttshlig
 21719 \let\digamma\textdigammagreek
 21720 \let\hardsign\cyrhrdsn
 21721 \let\softsign\cyrsoftsn
 21722 \let\hebsin\hebshin
 21723 \let\textsck\textPUscck
 21724 \let\textscm\textPUscm
 21725 \let\textscp\textPUscp
 21726 \let\textrevscr\textPUrevscr
 21727 \let\textrhoocka\textPUrhoocka
 21728 \let\textrhoocke\textPUrhoocke
 21729 \let\textrhoockepsilon\textPUrhoockepsilon
 21730 \let\textrhoockopeno\textPUrhoockopeno
 21731 \let\textdoublevertline\textbardbl
 21732 \let\dag\textdagger
 21733 \let\ddagger\textdaggerdbl
 21734 \let\ddag\textdaggerdbl
 21735 \let\mathellipsis\textellipsis
 21736 \let\EurDig\texteuro
 21737 \let\EURdig\texteuro
 21738 \let\EurHv\texteuro
 21739 \let\EURhv\texteuro

21740 \let\EurCr\texteuro
 21741 \let\EURcr\texteuro
 21742 \let\EurTm\texteuro
 21743 \let\EURtm\texteuro
 21744 \let\Eur\texteuro
 21745 \let\Denarius\textDeleatur
 21746 \let\agemO\textmho
 21747 \let\EstimatedSign\textestimated
 21748 \let\Ecommerce\textestimated
 21749 \let\bindnasrepma\textinvamp
 21750 \let\parr\textinvamp
 21751 \let\MVRightArrow\textrightarrow
 21752 \let\MVRightarrow\textrightarrow
 21753 \let\MVArrowDown\textdownarrow
 21754 \let\Force\textdownarrow
 21755 \let\textglobrise\textnearrow
 21756 \let\textglobfall\textsearrow
 21757 \let\Lightning\textlightning
 21758 \let\Conclusion\textRightarrow
 21759 \let\dashedleftarrow\textdashleftarrow
 21760 \let\dashedrightarrow\textdashrightarrow
 21761 \let\varnothing\textemptyset
 21762 \let\owns\textni
 21763 \let\notni\textnotowner
 21764 \let\varprop\textpropto
 21765 \let\varangle\textsphericalangle
 21766 \let\Anglesign\textsphericalangle
 21767 \let\AngleSign\textsphericalangle
 21768 \let\notdivides\textnmid
 21769 \let\varowedge\textowedge
 21770 \let\varovee\textovee
 21771 \let\varint\textint
 21772 \let\varoint\textoint
 21773 \let\downtherefore\textbecause
 21774 \let\textdotdiv\textdotminus
 21775 \let\AC\textsim
 21776 \let\wreath\textwr
 21777 \let\nthickapprox\textnapprox
 21778 \let\VHF\texttriplesim
 21779 \let\notasymp\textnasyp
 21780 \let\Doteq\textdoteqdot
 21781 \let\corresponds\texthateq
 21782 \let\Corresponds\texthateq
 21783 \let\nequal\textneq
 21784 \let\Congruent\textequiv
 21785 \let\NotCongruent\textnequiv
 21786 \let\notequiv\textnequiv
 21787 \let\LessOrEqual\textleq
 21788 \let\LargerOrEqual\textgeq
 21789 \let\apprle\textlesssim
 21790 \let\apprge\textgtsim
 21791 \let\varoplus\textoplus
 21792 \let\varominus\textominus
 21793 \let\varotimes\textotimes
 21794 \let\varoslash\textoslash
 21795 \let\varodot\textodot
 21796 \let\ocirc\textcircledcirc

21797 \let\varocircle\textcircledcirc
 21798 \let\varoast\textcircledast
 21799 \let\oasterisk\textcircledast
 21800 \let\rightvdash\textvdash
 21801 \let\leftvdash\textdashv
 21802 \let\leftvdash\textndashv
 21803 \let\downvdash\texttop
 21804 \let\upvdash\textbot
 21805 \let\nperp\textnupvdash
 21806 \let\models\textvDash
 21807 \let\rightmodels\textvDash
 21808 \let\rightVdash\textVdash
 21809 \let\rightModels\textVDash
 21810 \let\rightvdash\textnvdash
 21811 \let\rightmodels\textnvDash
 21812 \let\rightmodels\textnvDash
 21813 \let\rightVdash\textnVdash
 21814 \let\rightModels\textnVDash
 21815 \let\lessclosed\textlhd
 21816 \let\gtrclosed\textrhd
 21817 \let\leqclosed\textunlhd
 21818 \let\trianglelefteq\textunlhd
 21819 \let\geqclosed\textunrhd
 21820 \let\trianglerighteq\textunrhd
 21821 \let\Bowtie\textbowtie
 21822 \let\varcurlyvee\textcurlyvee
 21823 \let\varcurlywedge\textcurlywedge
 21824 \let\doublecap\textCap
 21825 \let\doublecup\textCup
 21826 \let\varsubsetneq\textsubsetneq
 21827 \let\varsupsetneq\textsupsetneq
 21828 \let\lessclosed\textntriangleleft
 21829 \let\ngtrclosed\textntriangleright
 21830 \let\Clocklogo\textclock
 21831 \let\ClockLogo\textclock
 21832 \let\baro\textstmaryrdbaro
 21833 \let\varparallelinv\textbbslash
 21834 \let\CleaningA\textCircledA
 21835 \let\Kutline\textCuttingLine
 21836 \let\CutLine\textCuttingLine
 21837 \let\Cutline\textCuttingLine
 21838 \let\MoveUp\textUParrow
 21839 \let\APLup\textbigtriangleup
 21840 \let\Bleech\textbigtriangleup
 21841 \let\MoveDown\textDOWNarrow
 21842 \let\APLdown\textbigtriangledown
 21843 \let\Diamond\textdiamond
 21844 \let\varbigcirc\textbigcircle
 21845 \let\Telefon\textPhone
 21846 \let\Box\textboxempty
 21847 \let\CheckedBox\textCheckedbox
 21848 \let\XBox\textCrossedbox
 21849 \let\CrossedBox\textCrossedbox
 21850 \let\rightpointleft\textHandLeft
 21851 \let\leftpointright\textHandRight
 21852 \let\PointingHand\textHandRight
 21853 \let\Pointinghand\textHandRight

21854 \let\Radiation\textRadioactivity
 21855 \let\Yinyang\textYinYang
 21856 \let\YingYang\textYinYang
 21857 \let\Yingyang\textYinYang
 21858 \let\Frowny\textfrownie
 21859 \let\Smiley\textsmiley
 21860 \let\Sun\textsun
 21861 \let\Mercury\textmercury
 21862 \let\textfemale\textPUfemale
 21863 \let\female\textPUfemale
 21864 \let\venus\textPUfemale
 21865 \let\Venus\textPUfemale
 21866 \let\Female\textPUfemale
 21867 \let\Earth\textearth
 21868 \let\mars\textmale
 21869 \let\Mars\textmale
 21870 \let\Male\textmale
 21871 \let\Jupiter\textjupiter
 21872 \let\Saturn\textsaturn
 21873 \let\Uranus\texturanus
 21874 \let\Neptune\textneptune
 21875 \let\Pluto\textpluto
 21876 \let\Aries\textaries
 21877 \let\Taurus\texttaurus
 21878 \let\Gemini\textgemini
 21879 \let\Cancer\textcancer
 21880 \let\Leo\textleo
 21881 \let\Virgo\textvirgo
 21882 \let\Libra\textlibra
 21883 \let\Scorpio\textscorpio
 21884 \let\Sagittarius\textsagittarius
 21885 \let\Capricorn\textcapricornus
 21886 \let\Aquarius\textaquarius
 21887 \let\Pisces\textpisces
 21888 \let\spadesuit\textspadesuitblack
 21889 \let\Heart\textheartsuitwhite
 21890 \let\heartsuit\textheartsuitwhite
 21891 \let\diamondsuit\textdiamondsuitwhite
 21892 \let\clubsuit\textclubsuitblack
 21893 \let\eighthnote\textmusicalnote
 21894 \let\Recycling\textrecycle
 21895 \let\VarFlag\textFlag
 21896 \let\textxswup\textdsmilitary
 21897 \let\textuncrfemale\textPUuncrfemale
 21898 \let\Football\textSoccerBall
 21899 \let\CutLeft\textScissorRightBrokenBottom
 21900 \let\Cutright\textScissorRightBrokenBottom
 21901 \let\RightScissors\textScissorRight
 21902 \let\Leftscissors\textScissorRight
 21903 \let\Letter\textEnvelope
 21904 \let\Writinghand\textWritingHand
 21905 \let\checkmark\textCheckmark
 21906 \let\ davidstar\textDavidStar
 21907 \let\llbracket\textlbrackdbl
 21908 \let\rrbracket\textrrbrackdbl
 21909 \let\RightTorque\textlcurvearrowdown
 21910 \let\Righttorque\textlcurvearrowdown


```

21911 \let\LeftTorque\textrcurvearrowdown
21912 \let\Lefttorque\textrcurvearrowdown
21913 \let\textvarobar\textobar
21914 \let\circledbslash\textobslash
21915 \let\obackslash\textobslash
21916 \let\varobslash\textobslash
21917 \let\odplus\textobot
21918 \let\varolessthan\textolessthan
21919 \let\varogreaterthan\textogreaterthan
21920 \let\divdot\textminusdot
21921 \let\doublesqcap\textsqdoublecap
21922 \let\doublesqcup\textsqdoublecup
21923 \let\merge\textdoublevee
21924 \let\leftVdash\textdashV
21925 \let\nleftVdash\textndashV
21926 \let\leftmodels\textDashv
21927 \let\nleftmodels\textnDashv
21928 \let\leftModels\textDashV
21929 \let\nleftModels\textnDashV
21930 \let\varparallel\textsslash
21931 \let\textheng\textPUheng
21932 \let\textlhookfour\textPUlhookfour
21933 \let\textscf\textPUscf
21934 \let\texttaolig\textPUaolig
21935 \let\Ganz\textfullnote
21936 \let\Halb\texthalfnote
21937 \let\Womanface\textWomanFace
21938 \let\Faxmachine\textFax
21939 \let\CEsign\textCESign
21940 }% \psdaliasnames
21941 </psdextra>

```

52 End of file hycheck.tex

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21942 <*check>
21943 \typeout{}
21944 \begin{document}
21945 \end{document}
21946 </check>

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